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ABSTRACT

In 1977-78, four remediation programs were funded under Title I and three under Impact Aid in New York City's School District 30. Title I programs included: (1) a teacher-paraprofessional reading team program in 12 elementary, intermediate and junior high schools: (2) a teacher-paraprofessional mathematics team program in 10 elementary, intermediate and junior high schools: (3) an optional assignment reading program for pupils who attended three District 30 schools beyond the bounds of their neighborhoods' attendance areas: and (4) a non-public school reading component for students in 3 private schools. Impact Aid programs included two reading and one mathematics component, all employing both teachers and paraprofessionals. The behavioral objective in each Title I and Impact Aid component was for seventy percent of the students to attain progress beyond their computed average rate of reading or math scores. With the exception of the optional assignment reading program, each program met or surpassed the objective. In this report, each program component is more fully described and student achievement data are presented. (Author/GC)

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ED186504

FINAL EVALUATION REPORT

for the

DISTRICT #30 E.S.E.A. TITLE I PROGRAMS - PL 89 - 10

and

IMPACT AID LOW RENT HOUSING PROGRAMS - PL 81 - 874

1977 - 1978

Program Title	Budget Code and Project Numbers
Teacher-Paraprofessional Reading Team Program	Budget Code - 5093 Project No. - 81652
Teacher-Paraprofessional Mathematics Team Program	Budget Code - 5093 Project No. - 81653
Optional Assignment Reading Program	Budget Code - 5093 Project No. - 81681
Non-Public Schools Reading Program	Budget Code - 5093 Project No. - 81654
Impact Aid Low Rent Housing Components	
Reading Program	Budget Code - 5093 Project No. - 88752
Optional Assignment Reading Program	Budget Code - 5093 Project No. - 88781
Mathematics Program	Budget Code - 5093 Project No. - 88753

An evaluation of New York City school district educational projects funded under Title I of the Elementary and Secondary Education Act of 1965 (PL 89-10), and Impact Aid Low Rent Housing Programs (PL 81-874), performed under contract with the Board of Education of the City of New York for the 1977-1978 school year.

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July 31, 1978

US DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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E.S.E.A. TITLE I PROGRAMS

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EXECUTIVE SUMMARY

Program

Four remediation programs were funded under Title I and three under Impact Aid in this, the twelfth year of Federal Funding:

1 - Reading Umbrella in 12 schools, with a mid-year modification adding personnel in 10 schools.

2 - Mathematics Umbrella in 9 schools, with a mid-year modification adding a program in one additional school.

3 - Optional Assignment Reading component in 3 schools.

4 - Non-Public Schools Component in 3 schools.

5 - Three Impact Aid Low Rent Housing Components in Reading and Mathematics in 8 schools.

Objectives

The behavioral objective in each program was for 70% of the students to attain progress beyond their computed average rate of reading or math scores. Each program met or surpassed the objective with the sole exception of the Optional Assignment Reading Program, encompassing 155 students. This program represented 8% of the total number of children treated under norm referenced tests.

Major Conclusions and Recommendations

The programs were well run and supervised. The emphasis on individualization through assistance from paraprofessionals allowing ratios of 1 to 5 or 7 was justified by the results, and should be continued.

The newly instituted Criterion Reference Tests can provide important diagnostic and behavioral benefits for programs of a short run nature.

The Program should be refunded.

IMPACT AID PROGRAM CLARIFICATION

For the purposes of exactness in reporting Norm Referenced and Criterion Referenced Test Data, Impact Aid Programs are sub-divided in the following manner;

Reading Program - Budget Code - 5093
Project No. - 88752

Reading Modification - Budget Code - 5093
Project No. - 88752

O.A. Reading Program - Budget Code - 5093
Project No. - 88781

O.A. Math Program - Budget Code - 5093
Project No. - 88753

Math Program - Budget Code - 5093
Project No. - 88753

These divisions will be found beginning on page 81 of this report.

Different types of tests were administered to the children according to their starting date in the Impact Aid Reading and Math Programs.

E.S.E.A. TITLE I PROGRAMS

District #30

I. INTRODUCTION

The 1977-78 school year was the 12th year of operation for the Feceral E S.E.A. Title I Program in Community School District #30.

This year 4 Title I and 3 Impact Aid Programs were designed to help eligible students improve in reading and/or mathematics. The Programs were divided into: 1) a Reading Component operative in 12 public schools, with a mid-year modification which added personnel in 10 of these schools, 2) a Mathematics Component operative in 9 public schools, with a mid-year modification which added a program in one additional school, 3) an Optional Assignment Component in reading functioning in 3 public schools, 4) a Non-Public School Component in reading placed in 3 parochial schools, and 5) 3 Impact-Aid Low Rent Housing Components in both Reading and Mathematics which operated in 8 schools.

II. GENERAL DESCRIPTION OF THE PROGRAM AND PROGRAM OBJECTIVES *

A. Teacher-Paraprofessional Reading Team Program - Budget Code 5093
Project No. 81652

The Reading Program was active in 9 elementary Public Schools, 2 Intermediate Schools and 1 Junior High School. It was conducted by teams of teachers and paraprofessionals who provided regular, daily small group and individualized instruction to students. The Program included 12 reading teachers, 34 paraprofessionals and 1,055 students.

*The Behavioral Objective in each of the following Programs was:

At the end of the school year, 70% of the participating students in the Program will have progressed more than their average rate of reading growth as measured by standardized tests. The Historical Regression Analysis will be performed with probability at the .05 level.

A Title I Mid-year Modification added to this Program 7 teachers, 12 paraprofessionals and 526 students. Six of the Elementary Schools were included as were both Intermediate Schools and the Junior High School.

B. The Teacher Paraprofessional Mathematics Team Program - Budget Code-5093
Project No.-81653

The Mathematics Program was active in 10 of these same Public Schools. 7 of these were Elementary Schools, 2 were Intermediate Schools and 1 was a Junior High School. The Mathematics Component also utilized the teacher-paraprofessional team approach in which the students received daily small-group and individualized instruction. The Program Design called for the inclusion of 9 mathematics teachers, 13 paraprofessionals, and in the final analysis, serviced 616 students.

A Mid-year Modification added 1 teacher and 1 paraprofessional plus 65 students in one Elementary School to this program.

C. Optional Assignment Reading Program-Budget Code-5093
Project No.-81681

The Optional Assignment Program was active in three Elementary Schools and was designed to provide special help in reading for pupils who attended District #30 schools that are beyond the bounds of their own neighborhoods' attendance areas. These 3 schools had Title I reading teachers, but no paraprofessionals. This year's Program Proposal called for the servicing of 175 students through this Component. The actual number of students served was 155 due to the deletion of a paraprofessional position at P.S. 166.

D. Non-Public School Reading Component - Budget Code-5093
Project No.-81654

This Program provided help in reading to eligible students in 3 Non-Public Schools. No paraprofessionals were assigned to this Program. Small group and individualized instruction were provided to 102 students in these three schools by two reading teachers.

One of these teachers served approximately 50 students daily. The second teacher traveled between schools serving 30 students in one school in the morning, and 20 students in the other school in the afternoon. Thus, the Component as a whole served 102 students as was called for in the Program Proposal.

E. Impact Aid Low Rent Housing Components - Reading Program-Budget Code-5093
Project No.-88752
OA Reading Program-Budget Code-5093
Project No.-88781
Mathematics Program-Budget Code-5093
Project No.-88753

This Impact Aid Modification to the 1977-78 Title I Program provided help in math and reading for Title I eligible students in 3 Public Schools, 2 Intermediate Schools, 1 Junior High School and 1 Optional Assignment Elementary School. The schools (with the exception of P.S. 11) in which the Impact Aid Components were placed also had regular Title I Reading and/or Math.

1. Impact Aid Reading Program - Budget Code-5093
Project No.-38752

In this Component, 204 students were given instruction in remedial reading by teachers and paraprofessionals in 3 Elementary Schools, and 1 Junior High School. Where paraprofessionals were assigned groups of students, the paraprofessionals were under the supervision of the regular Title I reading teacher in these situations.

2. Impact Aid OA Reading Program - Budget Code - 5093
Project No. - 88781

In this Component, one paraprofessional who shared a room with and was under the supervision of a teacher in another Reimbursable Program provided instruction in remedial reading to 20 students.

3. Impact Aid Math Program - Budget Code-5093
Project No.-88753

This Program provided remedial math instruction to children in one Elementary school, one Optional Assignment Elementary School and two Intermediate schools. Three math teachers and five paraprofessionals were employed in this component and 209 students were served daily by them.

B. On-Site Observations

By the end of the school year, each of the program components operating since September was visited four times. All program components added mid-year, or later, were visited two times with one or two exceptions in the case of very late program additions.

During these visits, the evaluator appraised the progress of the program with respect to staffing, available enrollment data, facilities, supplies, equipment and operation. The principals of all schools were interviewed in regard to their input in the program and the operation of the program in their individual schools at the first and last visits.

The evaluator observed actual group instruction, conducted interviews with each teacher and most of the paraprofessionals. (All interview forms are on file at the District Office for review by interested parties.)

The evaluator has met formally several times with the Director of Reimbursable Programs, and also with the two Coordinating Teachers, and has observed a parent workshop in math, reading, a District Parent Advisory Council meeting and a District Training Session for Reading Teachers.

The evaluator's school visits in several cases coincided with the on-site training being done by the Coordinating Teacher for the Reading Program.

The evaluator observed the daily activity of the Reimbursable Office Staff members in the District Office.

III. EVALUATION APPROACH

A. Treatment of Data

In early September, Data Collection Forms were distributed to all the target program teachers. These pre-test data were correlated with the scores received in the Spring and have been treated statistically in conformity with the evaluation design.

1. Data Analysis for the Teacher-Paraprofessional Reading Team Program - Budget Code - 5093
Project No. - 81652

For pupils in grades 2-9, predicted post-test grade equivalent scores will be computed on the basis of their previous growth rates as shown by their pre-test grade equivalent scores. T-tests will be applied to determine whether the pre-post test difference scores are statistically significant at the .05 level when compared to the predicted post test scores.

2. Data Analysis for the Teacher-Paraprofessional Math Team Program - Budget Code - 5093
Project No. - 81653

For all participating program pupils, predicted post-test grade equivalent scores will be computed on the basis of their previous growth rates as shown by their pre-test grade equivalent difference scores. To determine whether actual mean post test scores are higher than the predicted mean post-test scores at the .05 level of probability, T-tests will be applied.

3. Data Analysis for the Optional Assignment Reading Program
Budget Code - 5093
Project No. - 81681

For pupils in grades 2-6, predicted post-test grade equivalent scores will be computed on the basis of their previous growth rates as shown by their pre-test grade equivalent scores. T-tests will be applied to determine whether the mean actual post-test difference scores are statistically higher (.05 level) than the mean predicted post-test scores.

4. Data Analysis for the Non-Public School Reading Program
Budget Code - 5093
Project No. - 81654

Predicted post-test grade equivalent scores will be computed for all pupils on the basis of their previous growth rates as indicated by their pretest grade equivalent difference scores. To determine whether actual mean post-test scores are higher than the predicted mean post-test scores at the .05 level of probability, T-tests will be applied.

5. Data Analysis for the Impact Aid Reading/Math Programs
Reading Program - Budget Code - 5093
Project No. - 88752
OA Reading Program - Budget Code - 5093
Project No. - 88781
Math Program - Budget Code - 5093
Project No. - 88753

For pupils in grades 2-9, predicted post-test grade equivalent scores will be computed on the basis of their previous growth rates as shown by their pre-test grade equivalent difference scores. T-tests will be applied to determine whether the mean actual post-test scores are statistically higher (.05 level) than the mean predicted post-test scores.

B. General Background Information on Tests and Data Analysis

Following are the major types of tests given (Norm Referenced and Criterion Referenced) and the ways depicted in which they are analyzed in this report.

1. Norm Referenced Tests

Children who are pre tested in the fall (September and October) and post tested in the spring (May) meet the norming criteria of the test makers. Under the SED's*guidelines, statistical analysis for these children need not include a control group if each child's progress can be analyzed by his or her individual pre test score, number of months

*State Education Department

in the program, and number of years of schooling. The hypothetical rate of learning growth can thus be calculated and is called "historical regression". The hypothetical rate of learning growth is calculated as a predicted post test score which is analyzed against the child's actual post test score. If a child surpasses the predicted post test score, it can be said he or she has progressed more than his or her average rate of growth. If the post test score is less than the predicted post test score, the child has not progressed as predicted. The scores of all children in the norm referenced programs are calculated to determine if the objective for the particular component has been met. The objective for each program is that 70% of the children surpass their individual rate of growth. In addition, scores for each grade in the District participating in the program are analyzed through the historical regression design and calculated to determine if the growth that occurs by grade has statistical significance, i.e., if the improvement registered can be attributed to the effects of the program rather than to chance factors.

The types of Standardized reading tests used were:

Grade 2 - Houghton Mifflin Primary Reading Profiles Level 1 - Pre
" " " " " " 2 - Post

Grade 3 - Stanford Diagnostic Green Form A - Pre
" " " " B - Post

Grade 4 - " " " " A - Pre
" " " " B - Post

Grade 5, Grade 6, Grade 7, Grade 8, Grade 9 - Stanford Diagnostic Brown Form A - Pre
" " " " B - Post

The t Test

The purpose of the "t" test is to determine if the results that are achieved in the remedial program can be said to have occurred as a result of the program itself, i.e., the impact of the remediation program, rather than through chance factors. Therefore, a probability level of .05 is posited as the statistic that will provide assurance that chance factors are reduced. Thus a "t" test score that is significant at the .05 level of probability means that 95% of the achievement progress that was made can be attributable to the program that was conducted. If the probability level is shown at .01, it means that 99% of the achievement produced can be ascribed to the program. "T" scores achieving a probability level of less than .05 are listed as "non-significant". This does not mean that the program was not "good", nor that individual children did not learn as well as did those in groups that achieved "significance". It means that the State Education Department's confidence limit of 95% was not reached and therefore a prediction of achievement gained could not be made with the same assurance as levels at 95% or higher.

2. Criterion Referenced Tests (CRTs)

During the academic year, at the time the District was seeking program modifications through the State Education Department (SED), the District was advised by SED that the modifications needed to be treated differently than in years past. SED indicated it would not accept a statistical analysis which did not fall into the norming

period of the test maker. For example, administration of standardized pre tests in the fall and standardized post tests in the spring are acceptable because the District statistics generated can then be compared to a population that was pre and post tested over an academic year. As time between pre and post tests becomes shorter, the statistical results tend to become less conclusive.

SED recommended that the District employ CRTs because they are specific to the instruction given and do not require control groups nor statistical tests of significance. A CRT is a test that indicates whether or not a pupil knows particular elements of a subject. For example, "reading" can be divided into such subparts as vowels, syllables, antonyms, word meaning, main ideas, etc. To determine a pupil's greatest area of need, the teacher can give the child a number of vocabulary tests including synonyms, homonyms and antonyms. If the child successfully passes tests in synonyms and homonyms and fails to grasp antonyms, the teacher can concentrate on aiding the child to improve his/her skills by individualizing instruction on antonyms. Thus, building on the child's diagnosed strengths and weaknesses, the teacher can be more effective in aiding the child to read.

CRTs are used by determining how many pupils fail the pre test battery, and then determining at the post test how many of the failed items the pupil was able to learn in the interval between tests. If the pre test is too easy and the pupil passes the total battery, it is a meaningless exercise because the diagnostic element is lost. If the test is too difficult, the same problem holds because the teacher then does not know on what elements to concentrate since the pupil appears to be deficient in all skill areas.

The types of Criterion Reference Reading Tests used were:

Grade 1 - McGraw Hill Prescriptive Reading Inventory - Level A - Red Book

Grade 2 - " " " " " - Level B - Green Book

Grade 3 - Harcourt Brace Skills Monitoring System - Comprehension - Blue

Grade 4 - " " " " " " - Green

Grade 5 - " " " " " " - Purple

Grade 6 - " " " " " " - Purple

Grade 7, Grade 8, Grade 9 - 20 test items taken from: SDRT II, W
MAT Intermediate F
MAT Advanced G
SDRT Brown, A

Inasmuch as this was the first year that CRTs were administered in the District, it should be viewed as an experimental program, the results of which need to be viewed with care and understanding.

In reading, there were 4 major CRT skill areas:

Phonetic Analysis

Final Consonants and Blends
Consonant Blends
Vowels: Single Letters
Vowels: More Than One Letter
Silent Consonants, Hard and Soft C & G

Structural Analysis

Contractions
Prepositions, Phrases

Vocabulary

Antonyms
Homonyms
Synonyms
Word Meaning

Comprehension

Inferences, Cause or Effect
Facts and Details
Main Ideas
Sequence

In mathematics, the following CRT skill areas were used under the heading of Numbers, Operations and Applications:

Fractions (i.e., Positive Rational Numbers and Zero)
Decimals
Addition: Concepts and Skills
Subtraction: Concepts and Skills
Multiplication: Concepts and Skills
Division: Concepts and Skills
Place Value

3. Program Results

To facilitate the reader's understanding, the individual skill elements for Reading were combined into the 4 previously listed categories: Phonetic Analysis, Structural Analysis, Vocabulary and Comprehension. The individual skill elements for Mathematics were identified separately inasmuch as they are readily understandable concepts to the layman.

The analysis appears in the tables following each program. The total number of children in the program is listed by grade, i.e., Grade 1, N = 83.

The average number and average percent of children in the Treatment Group were listed by grade and program. The Treatment Group represents those children who failed the pre-test battery. The average number and per cent of pupils passing and failing the post test battery were then listed. For ease of interpretation, the data is presented in graph form, with written explanations following the graphs as the following indicate:

Example

Grade 1 Total Students Pretested 83	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	32.5	43%	pass
		57%	fail
Structural Analysis	27.5	55%	pass
		45%	fail
Vocabulary	32	57%	pass
		43%	fail
Comprehension	NA		pass
			fail

It appears that the treatment group had more difficulty with Phonetic Analysis than with Structural Analysis and Vocabulary, since more pupils failed than passed. The difference between pass and fail is not enough to state that more teaching emphasis should be placed on phonetic analysis; however, it does appear that the post test was difficult for a goodly number of the children on all these items.

Example

Grade 4 Total Pretested 31	Average N of Treatment Group	Criterion Referenced Tests Mathematics 0 — 100%	
Fractions/ Positive Rational Numbers & Zero	1		pass
			fail
Decimals	1		pass
			fail
Addition: Concepts & Skills	5		pass
			fail
Subtraction: Concepts & Skills	8	56%	pass
		44%	fail
Multiplication: Concepts & Skills	13	77%	pass
		23%	fail
Division: Concepts & Skills	14.5	69%	pass
		31%	fail
Place Value	15.5	55%	pass
		45%	fail

Most success was achieved in Addition, Multiplication and Division. Moderate success was shown in Place Values and Subtraction. Data on Fractions and Decimals was inconclusive.

IV. THE DISTRICT OFFICE OF REIMBURSABLE PROGRAMS

A. Evaluation Findings

This year the evaluator observed the operations of the District Office of Reimbursable Programs including the District Director of Funded Programs and the various other members of the staff who work in the office.

The District Director of Reimbursable Programs exercised overall supervision of all Title I (including Impact Aid PL 81-874), PSEN, Title IV-B (Materials and Equipment in Subject Areas), Chapter 71 (Laws of 1977), Mini-Grants, the fiscal and Administrative areas of Title VII (Bilingual) and Chapter 720 for District #30. Within this scope, the District Director actually accomplished the following: 1) Planning and writing of proposals; 2) Implementing proposals; 3) Overall supervision of personnel and instruction; 4) Monitoring and Evaluation of Programs; 5) Supervision of Fiscal and Administrative Department and 6) Accruals.

In order to implement all of the above, the Director was constantly available as a resource person for all personnel involved in the program and acted as a liaison between the District Office and the community as a whole. He was also the liaison between the Superintendent and Schools, and between Schools and the State Education Department. He was in contact with the Principals of all the schools involved in Reimbursable Programs, and with the Non-Public Schools participating in the Title I Programs. He assisted in setting up the Parent Advisory Councils for the individual schools and was the prime mover in establishing the District-Wide Parent Advisory Council. He handled all business with the Central Board of Education, including budgeting at the Budget Department of Title I,

Special Funding Department of the Board of Education, and preparing resolutions for the Central Board regarding Evaluation Agencies. He was in contact with the Evaluation Agency at the District level and was responsible for the evaluation design to be used by the agency. He also met with the State and Central Monitoring Task Forces whenever necessary.

As supervisor of personnel and instruction, he met with the personnel and spent time in the schools actually looking at the functioning of the Program Components.

As supervisor for the fiscal areas of the office, he made sure all proper records were kept for all Programs, supervised ordering and payment of all invoices; oversaw the ordering of all materials by all Programs; kept tabs on the District's Reimbursable payroll for teachers and paraprofessionals and prepared Modifications to receive accruals.

Miscellaneous duties included such things as: maintaining lists of Advisory Council members, minutes of meetings, notifications, liaison, etc.; and briefing and training sessions for schools and community people.

The District Director was assisted by a staff which included the two Coordinators (Teacher Trainers), a Senior Clerk and a Secretary in the Administrative Office. In the Financial office, the District employed three people who assisted the District Director with the fiscal side of the operation.

V. TEACHER-PARAPROFESSIONAL READING TEAM PROGRAM - BUDGET CODE - 5093
PROJECT NO. - 81652

A. Evaluation Findings

1. Initial Stages of the Program - Student Selection

During the first week of school the teachers reported working with the Rank Lists from which the students were chosen.

Before final selection of students for the Title I classes, according to the Title I eligibility standards, the Title I teachers coordinated their choices with the PSEN* teachers.

When asked the time of their first official roll call, teachers stated various dates ranging from September 26th through October 17th, with the average time being the first week in October.

2. Scheduling of Students

A recommendation from last year's final evaluation report calling for smaller remediation groups was implemented this year. Instead of a previous ratio of seven students per adult, a ratio of between five to seven students was required offering more individualization opportunities. The Coordinating Teachers recommended that the Reading and Math teachers initially schedule their classes with six students per adult, in order to alleviate the problem teachers previously faced of replacing students when class enrollment fell below the required minimum as students left the Program either through achievement or a move out of the District.

*PSEN = Program for Pupils with Special Educational Needs.

The evaluator found that only Title I eligible children were served by the Reading Program. Their eligibility was determined by Table 2 - 1976 NYC Reading Test Minimum Competency New York City Test Total Reading Scores Cut Off Points for Grades 1.7 - 9.9.

3. Placement of Title I Reading Personnel and Student Load

a. Primary Grades

In the three public schools which serviced 2nd graders there was one teacher and one paraprofessional per school serving small groups five periods a day. A Program Modification added another teacher-paraprofessional team to one of these three schools. 62 students were served in the additional component of the program.

b. Elementary Schools

In each of the six elementary schools under the original Program Proposal, the reading teachers were assigned more than one para-professional apiece. One of these six schools had a team of one teacher and five paraprofessionals, while the other five schools had teams of one teacher and three paraprofessionals. In these situations where the teacher was responsible for three or more paraprofessionals, she/he did not have an assigned group of students each period, but rather circulated during class and offered individual instruction to children with particular needs.

The required number of students to have been serviced in these six schools under the original Program Proposal was 500, though there may have been more at the beginning due to the flexible ratio of 5-7 students per adult. The actual number of students serviced as shown by end of the year records was 562.

A Modification added additional personnel and students in all 6 of these schools. In 3 schools, only paraprofessionals were added. Each of the paraprofessionals were to have served 30 students. The paraprofessionals were under the supervision of the Title I teachers already functioning in these schools. In the other 3 schools, teacher-paraprofessional teams were added which were to have served from 50 to 60 students apiece.

c. Intermediate Schools

Two Intermediate Schools in District #30 received Title I Reading service. End of the year statistics showed that 267 students were served daily in each of these two schools. In each of these schools, the Title I teacher supervised five paraprofessionals.

A Modification added one teacher, three paraprofessionals and approximately 100 students in one of the these Intermediate Schools, and two teachers, two paraprofessionals and approximately 100 students in the other.

d. Junior High School

One Junior High School had a Title I Reading Program with one teacher and one paraprofessional. 70 or more students were served in this Component as was required. This particular Component was smaller this year than it was last year when it serviced 175 students, and the teacher supervised five paraprofessionals instead of one.

A Mid-year Modification added one teacher, one paraprofessional and 70 or more students to this school.

4. Facilities

Nine of the twelve original Componerts functioned in large or regular sized classrooms. In one of the Intermediate Schools the teacher had an extra room next door to the Reading room which she used until the mid-year Modification team occupied the room. One Junior High Component functioned in a small room, but since there were never more than 14 students at a time in this room, the space was adequate.

One of the largest Reading Programs in the Title I Program functioned in a school where no permanent classroom was assigned to the Program. In addition to the inconvenience of constantly having to move from room to room, as they were vacated by the regular class, the teachers reported that it was also difficult to transport materials throughout the day. Consequently, a part of instruction, such as audio/visual enrichment, was not frequently employed in this school. Despite this situation, the teacher, the six paraprofessionals and the one Impact Aid Reading Paraprofessional appeared to function as well as possible under the adverse conditions.

Of the nine Reading Components added throughout the Mid-year Modification, only three teachers had to travel. The three paraprofessionals who tutored students under the Modification were all comfortably accommodated into the existing Title I Reading Program though one of these paraprofessionals also had to travel.

With the exception of the floating personnel, teachers had all decorated their bulletin boards, and kept the rooms attractive throughout the year.

5. Materials, Supplies and Equipment

At the time of the evaluator's first visit to the schools in October 1977, most teachers had just received notice of the allotments for Clerical Supplies, Textbooks, General Materials and Audio/Visual Supplies and were in the process of making selections within these various areas or had already sent in their orders to be processed at the District Office for Reimbursable Programs.

By the time of the evaluator's second visit in December, all ordering had been completed. The teachers reported receiving help from the Coordinating Teacher in this project when it was necessary.

The evaluators noted that almost all the teachers provided some sort of library for the students' use. A few of these libraries were quite extensive.

The evaluator also saw that all the teams employed the use of Audio/Visual aids from time to time, while some depended more heavily on these devices than others. All programs used equipment such as projectors, tape recorders, record players, cassette tape players and head-phones.

Personnel added mid-year were not in such a fortunate situation regarding materials. Although these teachers and paraprofessionals were allotted funds for ordering materials, until they were delivered, materials were, in some cases, scarce. Many of the Modification program components used materials loaned to them by the regular Title I teachers. Those supplies and materials, supplemented by teacher-made materials, were sufficient until orders arrived.

6. Records

The Program Proposal called for the following records to be maintained for each participant: standardized pre and post test scores, diagnostic test results, list of remediation skills necessary and plan for remediation, date of entry into program, attendance, and parental consent slip.

The evaluator found that all required documents were maintained.

Further, most teachers and paraprofessionals kept daily lesson plans, and/or logs of their own work and the chilrens' work. And, as daily papers were checked by the paraprofessionals and the teachers, the daily grades were recorded and the papers were then filed for good or for a time in the students' folders. Some of the teachers encouraged the students to take their work home from time to time for their parents to see. Most teachers gave the students their folders or envelopes to take home at the end of the year.

7. Methods of Instruction

As was the case last year, a high degree of individualization was an important aspect of the Title I Reading Program. The teacher-paraprofessional teams provided this instruction through one-to-one work with the students and through the small group method.

The Program Proposal called for the diagnostic-prescriptive approach to be used to teach the following skills: decoding, expanded vocabulary, comprehension, study skills, critical reading and test-taking techniques. The evaluator found that in all components of the Program, including mid-year modification additions, this diagnostic-prescriptive approach was used for teaching the above-menticned skills. The teachers and paraprofessionals initially diagnosed with a standardized diagnostic test, and

all teachers and paraprofessionals reported constant evaluation and diagnosis of each student on a daily basis.

Again this year, the Contract Method* was widely used in the Reading Program. In last year's Final Evaluation report, a recommendation was made that a variety of remedial techniques should continue to be considered in addition to the Contract Method. This suggestion was implemented in the Program Proposal this year. For example, the teachers were asked again to do group lessons as part of each instructional period, and the small group instructional method was almost universally applied in the elementary grades. In the Intermediate Schools and the Junior High, additional methods were applied as well.

The small group instruction implemented in the Program this year was very specifically defined in the Program Proposal. The Proposal reads:

> "Small group, individualized instruction will begin initially with an intensive analysis of formal and informal needs assessment of each child. The basic structural plan for small group instruction will be one which includes remediation of basic skill deficiencies. Thus, part of the instructional period will deal with perceptual acuity. Part of the instructional period will deal with appropriate phonics skills. Intensive sight and/or developmental vocabulary recognition will also be taught using a variety of teacher and commercially made materials and games. Comprehension will be a part of all the above activities."

* The Contract Method calls for each student, under the prescriptive-diagnostic approach to be assigned a block of work. The work is geared to the individual student's needs and relates to specific skills improvement. The student may work at his/her own speed under the supervision of the team. The completion of the contract may take about a week, or it may take a few days. If the work is too difficult, or too simple, this is noted by the paraprofessional or the teacher as the work is checked and the marks are recorded in the folders. The contract must then be altered to fit the specific need and ability level of the student. Some small rewards may be offered for the completion of the contract. This may take the form of a certificate to take home or post on the bulletin board. Also, a "free choice" may be offered at the completion of a section of work. This means that the student can choose to play a game or read a library book within the class period. Students frequently work with self grading materials, which may be double checked by the team. The teachers and the paraprofessionals confer on the preparation of new contracts.

The evaluator noted during observations and through interviews with the teachers, paraprofessionals and Coordinating Teacher, that in compliance with this plan, the teachers and paraprofessionals, at the suggestion of the Master Teacher usually divided their 45 minute periods into three segments. The first segment was generally a group lesson of about 15 minutes administered to the class as a whole, or to one small group at a time. The topic for the group lesson was usually followed up in the second 15 minute segment by an exercise pertaining to the topic of the lesson, or review work. The final 15 minutes of class was almost always reserved for the children to do their contract work or some version of highly individualized work. Within each day's work the goals were the remediation of some basic skill deficiency.

Another area of concentration this year, as in the past, was an effort to improve motivational attitudes. The teachers and the paraprofessionals consulted with the students over their diagnostic test results, and assisted them in setting goals for positive self-pacing achievement. The teachers were responsible for the selection of materials that fitted the students' needs and were not too difficult and thus defeating. The teachers and the paraprofessionals supervised the students in their use of the skills kits and other self-checking material. The evaluator noted that the use of the contracts and these individualized materials helped the students build self-reliance and to become self-motivated. The evaluator has also seen that in the Title I classrooms, due to the supportive atmosphere created by the paraprofessionals and the teachers, the students appeared to feel a sense of achievement in place of the peer group competition they may have felt in the regular classroom.

8. Reading Master Teacher (Coordinator)

Assisting in Teacher Training was one of the responsibilities of the Master Teacher who worked out of the District Reimbursable Office. The same individual filled this post as did last year. She is an experienced teacher and reading specialist, who assisted the Director in the general coordination of the Program and the teacher training for the regular Title I Reading Components the Non-Public School Components and the Impact Aid Reading Components.

The major method of teacher training continued to be the on-site visits regularly made by the coordinator to each component. Some schools were visited more frequently than others as need dictated. During these visits, the Master Teacher assisted the Title I teachers and paraprofessionals in the planning and implementation of the diagnostic-prescriptive approach. She helped teams in the process of individualization of work. Keeping constant check to be sure daily records were adequately kept by the teachers and paraprofessionals was an important part of her responsibility. From time to time, the Master Teacher provided demonstration lessons for the classes while she was in the school.

The Master Teacher assisted the Director in the organization, dissemination and collection of the pre and post-test data materials and in providing material for the teams for the diagnostic testing at the beginning of the school year. On September 26th, the Director called a general meeting of all the Title I teachers. At this introductory meeting, the Master Teacher provided the necessary packet of materials to each teacher so the required record keeping could be gotten underway. As the teachers followed up on this work, the Master Teacher offered guidance and assistance when she made her on-site visits.

In the initial stages of the Program, the Master Teacher also assisted teachers in ordering materials. Where necessary, she offered suggestions as to the kinds of materials available.

Another major task of the Master Teacher was to assist the Director in periodic training workshops for teachers and paraprofessionals. Last year the evaluators suggested that there be more training sessions done in the small group and in workshop settings rather than in the large general sessions. The Master Teacher assisted the Director in four such training workshops for the teachers and paraprofessionals. Three of these were for the teams which worked in the primary grades. At the end of January the Master Teacher assisted the Director in organizing a District Wide training session for all reading teachers where a guest speaker from the State Education Department addressed the group.

The primary grade teachers reported having felt the small group training sessions were beneficial and worth while. All teachers and paraprofessionals interviewed said they enjoyed the January meeting and had benefited from the information the speaker gave them. They also said they wished there had been more of this caliber of meeting throughout the year.

A further area in which the Master Teacher was active is parent communication. She was available for and attended a number of Parent Advisory Council meetings in the individual schools and at various times, Reading Workshops that were held in the schools. The evaluators attended a District-Wide Advisory Council meeting for Reimbursable Programs at which the Master Teacher gave a detailed presentation of the Reading Program to the Council members. She also gave a demonstration of methods of teaching reading, the problems in learning to read and the various skills necessary for a child to learn to read. She handed out packets of materials

she had compiled which would benefit parents in their efforts to help their children in the area of reading. The teachers reported that the Master Teacher had given this same sort of presentation to parents at several reading workshops, and that it was well received by the parents.

This year the Reading and Math Master Teachers spent time helping the Director organize, prepare for, install and coordinate the Impact Aid Component of Title I as well as the mid-year modification additions. Since there were a number of people involved in these components, the Master Teachers found themselves busy with assisting in the training of personnel, providing testing materials for the pre and post Criterion Reference Tests, helping the teachers and paraprofessionals procure materials, and other general tasks involved in the running of these components.

9. Paraprofessionals

The stated responsibilities of the paraprofessionals are exactly the same in the Reading Program as in the Math Program. See Section VI, Part A, #9, page 48 of this report for a full listing of these duties.

During the observations both this year and last year, and through interviews with the paraprofessionals and their supervising teachers, the evaluators found that the paraprofessionals more than adequately fulfilled the above requirements. They also appeared to be dedicated and sincere in their efforts to help the students. Further, their work with the children was extremely beneficial in raising levels of achievement.

Since a high level of individualization is considered essential to the major goals of the Title I Reading/Math Programs, utilization of paraprofessionals in the Program allows a small adult-pupil ratio to be maintained.

The teachers were responsible for supplying intensive training to the paraprofessionals in how to provide individualized instruction for their groups. This year, as last year, all 34 paraprofessionals in the original program were quite experienced and have been in the program 8, 9 or 10 years. Paraprofessionals selected to fulfill posts during mid-year were also experienced. Thus, the teachers reported they did not have to do too much formal training for the paraprofessionals, except in cases where paraprofessionals had worked in math but not in reading before.

All teachers and paraprofessionals reported that they were in constant daily communication with each other regarding on-going work plans, and that teacher training of paraprofessionals did occur routinely.

The evaluator found continuity in teacher-paraprofessional teams since many of them had worked together for several years. This helped in the functioning of the program as the teams which have been together know each others' working habits and run their programs very smoothly.

10. Parental Involvement

At the time of the evaluator's first visit in the beginning of October, Principals and teachers all reported having received parent consent slips and the evaluator saw that they were being kept on file in the Principals' offices. Also, most schools had begun to draw together a list of parents who said they would be part of the Parents' Advisory Council for the school.. The District Director told the evaluator that the individual schools usually hold three to five meetings per year of the schools' councils.

By the time of the evaluator's second visit in December, most schools reported having held at least one Parent Advisory Council (PAC) meeting, and that they were trying to recruit members of the schools' PACs to represent the schools at the District-Wide PAC.

By the end of the year, all Title I schools reported having called between 3 to 5 PAC meetings in the schools during the year. The evaluator was told, with a few exceptions, that it was extremely difficult to get parents to these meetings, no matter how much effort was put into this area by principals and by Title I teachers. Most teachers in the program reported seeing parents in the course of the open school nights rather than at the Title I PAC meetings.

From interviews with the teachers and Principals, the evaluator found that responsibility for the formation of the PAC and the calling of meetings usually was shared by the Principals with the Title I teachers. However, in several schools the Principals took total responsibility for the organization of the PACs and may or may not have included the teachers in the meetings of the schools' PACs.

Family Assistants were placed in three schools this year. In these three schools, most parental contact was left up to the Family Assistants who also assisted in organizing the schools' PAC meetings.

Several schools held Reading and/or Math workshops for parents. The teachers, paraprofessionals, Family Assistants and the Master Teacher worked together in conducting these workshops, and primarily used the time to explain the Program to the interested parents and to give them hints as to how they can help their children at home. Parents were encouraged to see the materials used in the classroom and even to watch the classes in operation.

Monthly PAC meetings have been held at the District level. Representatives from the individual schools' PACs, school Principals, Board Members, The District Director of Funded Programs and other District personnel and interested community people met to discuss all aspects of the Funded Programs. The evaluator attended one of these meetings held on December 20, 1977 at which a discussion of class size, use of paraprofessionals, State Education Department evaluation and an election of officers took place. The evaluator was kept apprised of all District PAC meetings and was also provided with minutes from these monthly meetings.

The District Director discussed with the evaluator the efforts made by the District Office to help get parents out to both the District PAC meetings and the individual schools' PAC meetings, and to realize the importance and value of their interest and support. The District Director has consistently taken the following steps toward the goal of Parental Involvement both at the District level and for individual schools:

1. Notifying each parent association of regulations and the necessity of setting up District-Wide and school PACs.

2. Keeping Principals notified of the regulations re: PACs.

3. Attending Parent Presidents' Council meetings and speaking to parent presidents about setting up school PACs, and sending representatives to District PAC meetings. Further, meeting with and speaking with various individual council members to stress the importance of each person helping to recruit more members to come to the meetings.

4. Speaking to various Board members, to the Title I teachers, to the Family Assistants and requesting them to assist in establishing Councils at the individual schools.

5. Preparing letters to send to each parent of participating children requesting that they volunteer for the Council.

6. Telephoning Council members before most District PAC meetings to remind them to attend.

11. The Family Assistants

Title I Family Assistants (FA) have been placed in three Title I schools this year instead of in two as was the case last year. These schools were chosen for this placement because they showed greatest need for such assistance and because the principals also expressed the desire to have the FAs in the schools. All three women are quite experienced in this field.

The primary responsibility of the FA is to act as liaison between the schools and the parents of Title I students. The evaluator learned from interviewing the FAs on several occassions, and from reading the daily logs which they must keep, that all the FAs were in contact with parents of students who were having problems with behavior, attendance, tardiness and inability to get classwork and homework done.

All FAs reported first trying to make contact with parents by phone. If this was impossible, they all reported sending letters in which the nature of the child's problem was explained.

The Title I teachers in the schools having FAs all said that they found the help of the FAs valuable in their work. In two of the schools where Reading and Math workshops for parents were held, teachers reported that the FAs had been helpful getting parents into the schools for these meetings. The evaluator attended several of these workshops during the year, and noted that the FAs had not only helped organize the meetings, but took part in the meetings as well.

In one of the schools the FA reported to the evaluator having provided help for the needy mother of 6 children. She sought aid from an outside facility which was able to place the children with friends of the family and the mother in a hospital. The FA also made a collection of clothes for the children who had almost no clothing at all.

12. Data Analysis

a. Background Information

Following are tables depicting the significance of the computed scores for the majority of children participating in the program. These tables reflect the scores for those students who were tested in September and October 1977 and post tested in May, 1978, thus meeting the norming criteria required by the State Education Department. The results are shown by grade. Statistical analysis is by the State-Education-Department approved t Test with significance at the .05 level of probability or better.

The students who entered the program after October, 1977 as a result of modifications in the program, or, for example, as replacements for children who moved from the District, were tested with Criterion Reference Tests (CRT). Since CRTs are specific to the instruction given, they are scored by determining the number of correct Post Test responses made from items failed on the Pre Test.*

b. Measurement Instruments

See pages 7 and 10 of this report for a full listing of the Measurement Instruments used.

c. Methods of Analysis

For grades 2-6, historical regression, predicted vs. obtained post scores were computed for each student and for each grade. In addition, results were computed for all children in the program and are shown separately in Table I. Correlated t-Tests were computed between the predicted post scores and obtained post scores.

*See page 8 for fuller explanation of CRTs.

TABLE I

Pre Test, Predicted Post Test and Post Test Scores on Stanford Achievement or Diagnostic Reading Tests using appropriate grade level forms. All pre tests were administered in September or October, 1977, with post tests given in May 1978.

READING
Budget Code - 5093
Project Number - 81652

Grade	N	Pre-Test Mean	Predicted Post Test Mean	Post Test Mean	t*	p**	Significance
2	170	1.440	1.718	2.282	11.501	.01	Yes
3	146	2.656	3.334	3.448	1.936	.05	Yes
4	163	3.069	3.627	3.874	4.142	.01	Yes
5	158	2.958	3.350	4.169	9.688	.01	Yes
6	169	3.911	4.385	5.080	7.962	.01	Yes
7	141	4.250	4.686	5.506	6.925	.01	Yes
8	52	5.563	6.116	6.852	5.376	.01	Yes
9	23	6.439	7.004	7.483	2.016	.05	Yes

Total 1022

*t-test
**Probability

d. Norm Referenced Test Results

There were 1055 children enrolled in the Title I Reading Program. 1031* had valid pre and post tests (98%) which is extremely high considering the possibility of illness or truancy taking place during either the pre test or the post test. 708 children scored higher on the post test than had been predicted representing 69% of the total children having pre and post tests who surpassed the average rate of expected growth.

The data from Table I indicates that a high level of significance was achieved for each grade in the program.

In every grade except for grades 3 and 9 the t score achieved exceeded the State requirement. In grades 3 and 9, the State requirement was met.

It can be stated that the objective of the program was met by percentage (within a conservative error factor estimate of 3%) and by tests of significance.

*Nine pre-test scores were eliminated from the historical regression analysis because they were below 1.0, hence not calculable according to the formula.

e. Criterion Reference Test Results

(1) Grade 1

TABLE II

Grade 1 Total Students Pretested 41	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	32	32% / 68%	pass / fail
Structural Analysis	30	53% / 47%	pass / fail
Vocabulary	30	67% / 33%	pass / fail
Comprehension	NA		pass / fail

An average of 33 pupils was in treatment out of a total of 41, indicating that the test material was initially quite difficult. Moderate to fairly high success (53% to 67%) was achieved in the post tests dealing with Final Consonants and blends, Structural Analysis, Prepositions and Phrases and Antonyms (Vocabulary). Less success was found on Consonant Blends and Vowels (Phonetic Analysis).

(2) Grade 2

TABLE III

Grade 2 Total Students Pretested 49	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	17.5	62% / 38%	pass / fail
Structural Analysis	20.5	81% / 19%	pass / fail
Vocabulary	17.8	65% / 35%	pass / fail
Comprehension	NA		pass / fail

Moderate to high success (62% to 81%) was achieved in all aspects of the Criterion Reference Post Tests. It appears that Vowels; Single Letters (Phonetic Analysis) presented the most difficulty. Most improvement was shown on Silent Consonants (Vocabulary).

(3) Grade 3

TABLE IV

Grade 3 Total Students Pretested 62	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA		pass fail
Structural Analysis	NA		pass fail
Vocabulary	5.8	89% / 11%	pass fail
Comprehension	24.3	67% / 33%	pass fail

Moderate to high success (67% to 89%) was achieved in all post test items. The highest amount of improvement was shown on Homonyms and Synonyms (Vocabulary).

(4) Grade 4

TABLE V

Grade 4 Total Students Pretested 47	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA		pass fail
Structural Analysis	NA		pass fail
Vocabulary	11	82% / 18%	pass fail
Comprehension	16.3	51% / 49%	pass fail

Excellent post test results were shown for Word Meaning, Homonyms and Facts and Details (Vocabulary). Less improvement was shown for Main Ideas and Sequence (Comprehension).

(5) Grade 5

TABLE VI

Grade 5 Total Students Pretested 27	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA		pass fail
Structural Analysis	NA		pass fail
Vocabulary	5.5	69% / 31%	pass fail
Comprehension	11.2	60% / 40%	pass fail

An average of 33% of the children were in treatment, indicating that most of them (67%) did well on the post test. For those who were in treatment, moderately high success (69%) was shown for all test items except in the case of Comprehension, where 60% showed difficulty.

(6) Grade 6

TABLE VII

Grade 6 Total Students Pretested 82	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA		pass fail
Structural Analysis	NA		pass fail
Vocabulary	93	77% / 23%	pass fail
Comprehension	19.9	65% / 35%	pass fail

Only an average of 15% of the children were in treatment indicating the possibility that the pre test might not have been correctly targeted. The post test results were moderately to highly successful for all items. Best results were achieved in Homonyms (Vocabulary), with least success in identifying Author's Purpose and Techniques (Comprehension).

(7) Grade 7

TABLE VIII

Grade 7 Total Students Pretested 113	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA		pass fail
Structural Analysis	NA		pass fail
Vocabulary	42	19% — 81%	pass fail
Comprehension	28.3	67% — 33%	pass fail

An average of 34% of the students taking the pre test composed the treatment group. Considerable growth was shown on Comprehension items with less success shown on Vocabulary items. It appears that future teaching efforts in this grade could be concentrated on Vocabulary building.

(8) Grade 8

TABLE IX

Grade 8 Total Students Pretested 73	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA		pass fail
Structural Analysis	NA		pass fail
Vocabulary	33.2	48% — 52%	pass fail
Comprehension	17.3	88% — 12%	pass fail

An average of 45% of the students taking the pre test composed the treatment group on Vocabulary, while only 23% composed the treatment group on Comprehension. In Vocabulary, most post test success was achieved on Word Meaning (Comprehension) and the most difficulty was encountered on Antonyms (Vocabulary). All comprehension items were tested as highly successful.

(9) Grade 9

TABLE X

Grade 9 Total Students Pretested 12	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA	- - - - - - - - - - - - - - - - - - - -	pass fail
Structural Analysis	NA	- - - - - - - - - - - - - - - - - - - -	pass fail
Vocabulary	7	19% - 81%	pass fail
Comprehension	2		pass fail

There were only 12 students in this group, but again, as in grades 7 and 8, the Vocabulary items produced the most difficulty. If the test items are comparable, it appears that teaching concentration should be on Vocabulary. The two children in treatment in the comprehension sub test scored 100%.

B. CONCLUSIONS - READING PROGRAM

1. The Program accomplished its remediation objectives according to the data reported. Significance was achieved in all grades on norm referenced tests.

2. Criterion Referenced Test results proved to be a promising and valuable diagnostic and teaching tool for programs of short duration.

3. Program start-up was accomplished in a timely manner.

4. All but one component of the Reading Program had adequate space.

5. The diagnostic-prescriptive approach was implemented per the Program Proposal.

6. More individualization took place this year in accordance with one of last year's evaluation recommendations.

7. Teacher training was conducted not only during the on-site visits, but also in small groups, and the workshop format was used for the large sessions per last year's evaluation recommendation.

8. The Master Teacher was responsive to the needs of the Reading Teachers and also to her duties within the District Office.

9. Teacher-paraprofessional teams worked well together as well as with their students.

10. The presence of the paraprofessionals in the Program made more possible the goal of intensive individualized instruction.

11. Proper steps were taken to seek parental involvement in Parent Advisory Council meetings, both in the individual schools and at the District level.

12. Family Assitants adequately performed their required functions.

C. RECOMMENDATIONS - READING PROGRAM

1. The Program should be continued.

2. Continue the utilization of the diagnostic-prescriptive approach to teaching reading as well as all efforts being made to implement highly individualized instruction to all pupils.

3. Continue present efforts to make the Training Sessions meaningful to the teachers and paraprofessionals.

4. Continue the efforts being made to involve parents in the Title I Reading Program.

5. Seek adequate space for the teacher-paraprofessional team which currently has to travel.

VI. TEACHER PARAPROFESSIONAL MATHEMATICS TEAM PROGRAM - BUDGET CODE - 5093
PROJECT NO. - 81653

A. Evaluation Findings

1. Initial Stages of the Program - Student Selection

As in the Reading Program, start up time at the beginning of the year was used in preparing the rooms and the materials for the students. The paraprofessionals were placed in the schools on the 12th of September and immediately began to assist the teachers.

The major task in the initial stages of the Program was the selection of students. In the Math Program, the selection of students took a little more time than it did in the Reading Program. The Rank Lists were made the previous Spring from teacher judgement, except grade five which was given the N.Y.C. Spring Test. All students were tentatively selected from these lists. The Metropolitan Achievement Test (MAT) was administered to determine which students were below minimum competency on a standardized test and therefore eligible for the program. All new arrivals also had to be tested to determine eligibility for the Title I Program.

Before final selection for the Title I classes, the Title I teachers had to coordinate their choices with the PSEN* teachers in the schools where both programs were functioning. When the teachers of each program had made their selection of students, the Title I teachers, with the assistance of their paraprofessionals, administered the initial Stanford Diagnostic Test for diagnostic purposes which they also scored and analyzed.

*PSEN = Program for Pupils with Special Educational Needs.

2. Scheduling of Students

A recommendation from last year's final evaluation report stated that similar remediation groups should be used. This was implemented in the Program this year, and instead of a ratio of seven students per adult having been required in the Program Proposal, a ratio of between five to seven students was required. This offered a certain flexibility and the possibility of smaller instructional groups where necessary.

This year's original Program Proposal required the servicing of 570 students by 9 teachers and 13 paraprofessionals. A mid-year Modification added one teacher, one paraprofessional and 70 students in one primary school to this Program. This was a school which had previously had only a reading component.

This year the Coordinating teachers suggested to the Math and Reading teachers that they initially schedule their classes with 6 students per adult, since the Program Proposal's stated requirement is based on five students per adult. The Coordinators felt that this would alleviate the problem teachers face of replacing students when class enrollment fell below the required minimum as students left the Program either through achievement or a move out of the District.

The evaluators found that only eligible children were being served by the Program. Their eligibility was based on disadvantages in mathematics as shown on the schools' ranked lists prepared in June, 1977 backed up by the further administration of the MAT.

Students were scheduled for remedial instruction in math 45 minutes a day five days a week.

3. Placement of Title I Mathematics Personnel and Student Load

a. Elementary Schools

Seven elementary schools in District #30 received the services of Title I math teams. In five of these schools, the teachers supervised one paraprofessional apiece, and in the other two, the teachers supervised two paraprofessionals apiece. In each of these math components, the teachers and the paraprofessionals were responsible for 5-7 students for 5 periods a day.

The original Program Proposal called for 420 students to be serviced in these six schools, though there were more due to the flexible 5-7 student-teacher ratio. The actual number served under the original program was 616.

A Modification added one teacher who supervised one paraprofessional in one of the primary schools. Through the Modification, 65 students were served.

b. Intermediate Schools

Two Intermediate Schools in District #30 received Title I Math services. The original Program Proposal required that a minimum number of 75 students be serviced in each of these schools. In each of these components, one teacher supervised two paraprofessionals.

No math Modification was scheduled for these two Intermediate Schools.

c. Junior High School

One Junior High School had a Title I Math Program with one teacher and one paraprofessional. The required 70 students were served in this component.

4. Facilities

Eight of the ten components functioned in large or regular sized classrooms. One of the Intermediate School teachers worked in a room which was partitioned into several smaller rooms. The teacher worked with her groups in the main room and the paraprofessionals worked with their groups in the two other sections of the room.

One of the Math Components in the Program functioned in a school where no permanent classroom was assigned to the Program. In addition to the inconvenience of constantly having to move from room to room, as they were vacated by the regular class, the teacher reported that it was also difficult to transport materials throughout the day and up and down the stairs.

With the exception of the floating team, teachers all decorated their bulletin boards, and kept the rooms attractive.

5. Materials, Supplies and Equipment

At the time of the evaluator's first visit to the schools in October, 1977, most teachers had just received notice of the allotments for Clerical Supplies, Textbooks, General Materials and Audio/Visual supplies and were in the process of making selections within these various areas or had already sent in their orders to be processed at the District Office for Reimbursable Programs.

By the time of the evaluator's second visit in December, all ordering had been completed. The teachers reported receiving help from the Coordinating Teacher in this project when it was necessary.

The Program Proposal this year stated:

> "Hand-held calculators will be used to motivate the students in math. They will be used in conjunction with teaching problem solving. The calculator will be used to check work the student has completed. An example of this will be to use the calculator to check long-division problems."

Teachers all reported having ordered calculators or already having them in stock for the students' use.

One teacher reported wanting to order materials for use with the Systems 80 machine which is available in her school.

The teams employed the use of Audio/Visual aids from time to time, while some depended more heavily on these devices than others. All components have equipment such as projectors, tape recorders, record players, cassette tape players and head phones for these sets.

6. Records

The Program Proposal called for the following records to be maintained for each participant: standardized pre and post test scores, diagnostic test results, list of remediation skills necessary to overcome weakness and plan for remediation, work folders, date of entry into program, attendance, and parental consent slips. The evaluator found that all required documents were kept.

Further, most teachers and paraprofessionals kept daily lesson plans, and/or logs of their own work and the childrens' work. And, as daily papers were checked by the paraprofessionals and the teachers, the daily grades were recorded and the papers were then filed for good or for a time in the students' folders. Some of the teachers encouraged the students to take their work home from

time to time for their parents to see, and allowed the children to take other work home at the end of the year.

7. Methods of Instruction

As was the case last year, a high degree of individualization was an important aspect of the Title I Math Program. The teacher-paraprofessional teams provided this instruction through one-to-one work with the students and through the small group method.

The Program Proposal called for the diagnostic-prescriptive approach to be used to teach arithmetic facts, comprehension of mathematical concepts, study skills, test-taking techniques and functional everyday math. The evaluator found that in all components of the Program, this diagnostic-prescriptive approach was used for teaching the above-mentioned skills. The teachers and paraprofessionals initially diagnosed with a standardized test and all teachers and paraprofessionals reported constant evaluation and diagnosis of each student on a daily basis.

Again this year, the Contract Method (see Section V.A, #7, p.21 of this report for a full description of the Contract Method) was widely used in the Math Program. Six out of the seven elementary teachers used formal Contracts, while the seventh teacher used an informal sort of Contract whereby students' daily work was logged. In last year's Final Evaluation Report, a recommendation was made that a variety of remedial techniques should be considered in addition to the Contract Method. This suggestion was implemented in the Program Proposal this year.

The evaluator asked the teachers if they had changed

their approach or methods of teaching in any significant way since last year. All teachers said they had made group lessons a part of the daily work when feasible. Several said that they had done even more individualization than last year with more specific assignments for the children as per their diagnoses. Several teachers stated that they had been more activity-oriented this year and had drilled more on the facts. Other teachers said they had started at an even more elementary plane with their students, drilling on the arithmetic facts and even on reading numbers.

At the end of the year, the evaluator found that a number of the math teachers had involved their students in various projects which were designed to help the students in practical math, as well as to keep a high level of interest in the classroom.

Almost all teachers interviewed stated at the end of the year that they had been pleased with the test scores for the students, and felt that, in general, this year's math program had been successful.

8. Master Teacher (Coordinator)

Assisting the Director in Teacher Training was one of the responsibilities of the Teacher Trainer/Coordinator who worked out of the District's Reimbursable Office. The same individual filled this post as did last year. She was an experienced teacher and Math and Reading specialist, who assisted the Director in the general coordination of the Program and the teacher training for the regular Title I Math components, the Optional Assignment Reading Components and the Impact Aid Math components.

The major method of teacher training continued to be the on-site visits regularly made by the coordinator to each component. Some schools were visited more frequently than others as need dictated.

During these visits, the Coordinator assisted the Title I teachers and paraprofessionals in the planning and implementation of the diagnostic-prescriptive approach. She helped teams in the process of individualization of work. She kept constant check to be sure daily records were adequately kept by the teachers and paraprofessionals. From time to time the Coordinator provided demonstration lessons for the classes while she was in the school.

The Coordinator assisted the Director in organizing the dissemination and collection of the pre and post test data collection materials and in providing material for the teams for the diagnostic testing at the beginning of the school year. On September 26th, the Director called a general meeting of all the Title I teachers. At this introductory meeting, the necessary packet of materials was given to each teacher so the required record - keeping could be gotten underway. As the teachers followed up on this work, the Master Teacher offered guidance and assistance when she made her on-site visits.

The Coordinator reported that she assisted in another district-wide Title I Mathematics Training session for all Math Teachers and paraprofessionals in the program on April 19, 1978.

In the initial stages of the Program, the Master Teacher also assisted teachers in ordering materials. Where necessary, she offered suggestions as to the kinds of materials available.

Parent communication was a further area in which the Master Teacher was active. She was available for and attended a number of Parent Advisory Council meetings in the individual schools and at various times, Math workshops that have been held in the schools. The evaluator attended several parent workshops. The meetings were well attended and the Master Teacher and the Title I Math teachers

used these opportunities to explain the Program to parents, and to discuss at length what the parents could do to help their children at home. The Math Coordinator reported that other workshops throughout the year had been equally as successful in two of the other schools.

This year the Reading and Math Coordinators assisted the Director in helping organize, prepare for, install and coordinate the Impact Aid Component of Title I as well as the mid-year modification additions. Since there were a number of people involved in these components, the Coordinators found themselves busy assisting with training personnel, providing testing materials for the pre and post Criterion Reference Tests, helping the teachers and paraprofessionals procure materials, and other general tasks involved in the running of these components.

9. Paraprofessionals

The stated responsibilities of the paraprofessionals are: (1) to individualize instruction under the teacher's supervision; (2) to be able to operate and effectively utilize the Audio/Visual equipment as directed by the teacher; (3) to keep accurate and detailed records of each student's progress in order to assist the teacher in planning work for each student; (4) to keep the teachers posted as to any educational problems they may notice in a student (5) to assist the teacher in any Program related matter; and (6) to tutor students during the Teachers' preparation period, and in schools operating with 8 periods, during this eighth period as well. The evaluator found that the paraprofessionals did this routinely.

10. Parental Involvement

Parental involvement in the Math Program was the same as was described for the Reading Program. (See Section V, A, #10, p. 26 for information regarding parental involvement in the Title I Reading and Math Programs.)

11. The Family Associates

The Family Associates functioned within the Math Program exactly as they did in the Reading Program. (See Section V, A, #11, p. 29 for a full description regarding the functioning of the Family Associates within the Title I Program components.)

12. Data Analysis

a. Background Information

Following are tables depicting the significance of the computed scores for the majority of children participating in the program. These tables reflect the scores for those students who were tested in September and October 1977 and post tested in May, 1978, thus meeting the norming criteria required by the State Education Department. The results are shown by grade. Statistical analysis is by the State Education Department approved t Test with significance at the .05 level of probability or better.

The students who entered the program after October, 1977 as a result of modifications in the program, or, for example, as replacements for children who moved from the District, were tested with Criterion Reference Tests, (CRT). Since CRTs are specific to the instruction given, they are scored by determining the number of correct Post Test responses made from items failed on the Pre Test.*

b. Measurement Instruments

See pages 7 and 10 of this report for a full listing of the Measurement Instruments used.

c. Methods of Analysis

For grades 2-6, historical regression, predicted vs. obtained post scores were computed for each student and for each grade. In addition, results were computed for all children in the program and are shown separately in Table IX. Correlated t-Tests were computed between the predicted post scores and obtained post scores.

*See page 8 for fuller explanation of CRTs.

d. Norm Reference Test Results

Pre Test, Predicted Post Test and Post Test Scores on Stanford Achievement or Diagnostic Reading Tests using appropriate grade level forms. All pre tests were administered in September or October, 1977, with post tests given in May 1978.

TABLE I

Grade 2	N	Pre-Test Mean	Predicted Post Test Mean	Post Test Mean	t*	p**	Significance
Total	16	1.331	1.509	2.331	6.285	.01	Yes

TABLE II

Grade 3	N	Pre-Test Mean	Predicted Post Test Mean	Post Test Mean	t*	p**	Significance
Computation	84	2.092	2.465	3.367	7.286	.01	Yes
Concepts	84	1.926	2.239	3.142	11.279	.01	Yes
Problem Solving	84	2.010	2.355	2.932	6.043	.01	Yes
Total	84	1.932	2.248	3.127	13.642	.01	Yes

TABLE III

Grade 4	N	Pre-Test Mean	Predicted Post Test Mean	Post Test Mean	t*	p**	Significance
Computation	105	3.053	3.515	4.494	10.464	.01	Yes
Concepts	105	2.801	3.208	3.921	8.445	.01	Yes
Problem Solving	105	2.530	2.878	3.552	7.132	.01	Yes
Total	105	2.751	3.147	3.969	11.877	.01	Yes

TABLE IV

Grade 5	N	Pre-Test Mean	Predicted Post Test Mean	Post Test Mean	t*	p**	Significance
Computation	119	3.901	4.407	5.862	18.780	.01	Yes
Concepts	119	3.444	3.872	5.045	12.475	.01	Yes
Problem Solving	119	3.066	3.426	4.310	9.294	.01	Yes
Total	119	3.448	3.876	5.036	19.740	.01	Yes

TABLE V

Grade 6	N	Pre-Test Mean	Predicted Post Test Mean	Post Test Mean	t*	p**	Significance
Computation	89	5.026	5.605	6.283	7.053	.01	Yes
Concepts	90	4.369	4.854	5.576	5.512	.01	Yes
Problem Solving	90	4.196	4.657	4.863	1.583	.05	No
Total	90	4.566	5.079	5.487	5.538	.01	Yes

TABLE VI

Grade 7	N	Pre-Test Mean	Predicted Post Test Mean	Post Test Mean	t*	p**	Significance
Computation	78	5.451	5.982	6.824	6.123	.01	Yes
Concepts	78	4.703	5.145	5.909	5.967	.01	Yes
Problem Solving	78	4.499	4.916	5.572	4.359	.01	Yes
Total	78	4.917	5.384	6.240	9.366	.01	Yes

TABLE VII

Grade 8	N	Pre-Test Mean	Predicted Post Test Mean	Post Test Mean	t*	p**	Significance
Computation	109	5.727	6.216	7.627	11.157	.01	Yes
Concepts	109	5.249	5.687	6.839	10.367	.01	Yes
Problem Solving	109	5.660	6.139	6.624	3.734	.01	Yes
Total	109	5.538	6.007	7.108	12.498	.01	Yes

TABLE VIII

Grade 9	N	Pre-Test Mean	Predicted Post Test Mean	Post Test Mean	t*	p**	Significance
Computation	14	7.421	8.038	10.821	7.736	.01	Yes
Concepts	14	6.543	7.070	8.571	3.614	.01	Yes
Problem Solving	14	7.914	8.576	8.643	.160	.50	No
Total	14	7.236	7.832	9.336	6.455	.01	Yes

TABLE IX

Grade -All	N	Pre-Test Mean	Predicted Post Test Mean	Post Test Mean	t*	p**	Significance
Computation	598	4.283	4.776	5.897	24.060	.01	Yes
Concepts	599	3.822	4.245	5.182	21.399	.01	Yes
Problem Solving	599	3.765	4.173	4.754	12.138	.01	Yes
Total	615	3.873	4.303	5.207	28.916	.01	Yes

There were 616 children enrolled in the program with valid pre and post tests for 615. 89% of the children tested exceeded their predicted post test scores.

The Math Program was treated differently this year. Tests of significance were run on "Tested" scores as well as the sub items of "Computation, Concepts and Problem Solving". This was done to determine if there should be special emphasis placed by the Master Teacher on any one or combination of sub components.

Grades 2 through 9 were tested on all three components as well as the Total Score. The N varies slightly among components since Grade 2 Primary I Pre Test only gives a total score. The tests for the other grades provide data in Concepts, Computation and Problem Solving in addition to Total Score.

A review of the Tables indicates that the Total Program was highly significant (.01) for all grades. It appears that Problem Solving requires the most emphasis in the future, since the correlations, although high for all grades except 6 and 9 did not compare as well to Computation and Concept sub scores. Taken as a whole, Computation proved to be the highest cumulatively, with Concepts and Problem Solving following the next in line.

Both the percentage outcome and tests of significance indicated that the Program Objective was met.

e. Mathematics Modification
Criterion Reference Test Results

TABLE X

Grade 1 Total Pretested 37	Average N of Treatment Group	Criterion Referenced Tests Mathematics 0 — 100%	
Preoperational Concepts, Equiv., Order, Number, etc	34	94% / 6%	pass / fail
Decimals	NA		pass / fail
Addition: Concepts & Skills	36	92% / 8%	pass / fail
Subtraction: Concepts & Skills	37	51% / 49%	pass / fail
Multiplication: Concepts & Skills	NA		pass / fail
Division: Concepts & Skills	NA		pass / fail
Place Value	NA		pass / fail

TABLE XI

Grade 2 Total Pretested 28	Average N of Treatment Group	Criterion Referenced Tests Mathematics 0 — 100%	
Fractions/ Positive Rational Numbers & Zero	NA		pass / fail
Decimals	NA		pass / fail
Addition: Concepts & Skills	28	86% / 14%	pass / fail
Subtraction: Concepts & Skills	27	93% / 7%	pass / fail
Multiplication: Concepts & Skills	NA		pass / fail
Division: Concepts & Skills	NA		pass / fail
Place Value	28	82% / 18%	pass / fail

Great success was achieved for both grades, with perhaps the classical example of how Criterion Referenced Tests can best be employed. First, most of the children failed the pre test, indicating that they were in fact not knowledgable about the subject matter. By the time the treatment group was post tested, virtually all the children had mastered the subject matter. In grade 1, the most difficulty was found in Subtraction, which is not unusual, since by grade 2, as was shown, 93% of the children had mastered Subtraction.

B. CONCLUSIONS - MATHEMATICS PROGRAM

1. The Program accomplished its remediation objectives according to the data reported. Significance was achieved in all grades on norm referenced tests.

2. Criterion Referenced Test results pointed to their being a promising and valuable diagnostic and teaching tool for programs of short duration.

3. Program start-up was accomplished in a timely manner.

4. All but one component of the Math Program had adequate space.

5. All components of the Math Program had adequate equipment, materials and supplies.

6. The diagnostic prescriptive approach was implemented per the Program Proposal.

7. More individualization was possible this year as the groups were small in accordance with one of last year's evaluation recommendations.

8. The teachers stressed basic number facts and practical math in the classrooms. They also strove to integrate their teaching into what was taught in the regular classrooms.

9. Teacher Training was conducted on a routine basis primarily through on-site visits by the Master Teacher.

10. The Master Teacher was responsive to the needs of the Math Teachers and also to her duties within the District Office.

11. Supported by both interviews and observations was the conclusion that almost all teacher-paraprofessional teams worked well together and consequently with their students.

12. The presence of the Paraprofessionals in the program made more possible the goal of intensive individualization of instruction.

13. Proper steps were taken to try to get the parents to attend Parent Advisory Council meetings, and to commit themselves to these Council meetings both in the individual schools and at the District Level.

14. Family Assistants adequately performed their required functions.

C. RECOMMENDATIONS - MATHEMATICS PROGRAM

1. The program should be continued.

2. Criterion Referenced Tests should be continued for programs of short duration.

3. Continue the utilization of the diagnostic-prescriptive approach to teaching Math as well as all efforts being made to implement highly individualized instruction to all pupils.

4. Continue present on-site teacher training, and strive to make large training sessions meaningful and helpful to Math teams.

5. Continue the efforts being made to involve parents in the Title I Math Program.

6. Seek adequate space for the teacher-paraprofessional team which currently has to travel.

VII. OPTIONAL ASSIGNMENT READING PROGRAM - BUDGET CODE - 5093
PROJECT NO. - 81681

A. Evaluation Findings

1. Initial Stages of the Program and Student Selection

Even though there was an unusual delay in approval for funding of the three Optional Assignment Program Components this year, classes were under way in a timely fashion by the first part of October. The first official roll call in one school was on October 4th, and October 12th in the other two, with the usual pre-testing having been concluded. The Stanford Diagnostic Test was administered by the District.

Students selected for this program were chosen from those who were bused into the Optional Assignment Schools. The children came from poverty areas within the District. As in the Reading and Math Programs, the rank lists of test scores provided the final criteria for student selection. The children had to score below minimum competancy to be eligible for the program.

Students who left the school, or were discharged from the program, were replaced by others who were eligible for the program.

2. Scheduling of Students and Personnel

The three Reading Teachers in the Optional Assignment Program provided remediation in reading 5 periods a day, 5 days a week in 3 elementary schools in District #30. The teachers worked with 10 students per period. Each teacher saw 50 students a day, making a total of 150 students in the Program as a whole.

At the beginning of the year, one school was assigned a paraprofessional as well. However, a Program Modification removed this paraprofessional from the Optional Assignment reading component a few weeks after the program got under way. Hence, though the teachers had

10 students per group, they did not have the help of another adult in the room for reading instruction.

3. Facilities, Materials, Supplies and Equipment

This year, two of the teachers remained in the same classrooms they had occupied last year. One of these is a regular-sized classroom and one is a small classroom. The third teacher was placed in a large classroom as opposed to the small room she had been assigned for most of the previous year.

Two of the teachers creatively decorated the rooms with posters and materials relevant to the subject area. These two teachers also had all materials within easy access for the students' use. Skills kits, games, puzzles, etc. were all displayed on shelf space around the rooms. The third room was not elaborately decorated, nor were the materials invitingly displayed or easily accessible to students at the beginning of the year. As the year progressed, this third O.A. program component fell more directly under the supervision of the A.P. in the school. He helped the teacher with reassessment of materials she had available, but was not using, and helped her make them accessable to the students.

By the time of the evaluator's second visit in December, all ordering had been completed.

All three rooms contained Audio/Visual equipment such as projectors, tape recorders and record players. Since the program operated in these same schools last year, the rooms were stocked with materials such as reading skills kits, books, reading games and puzzles. The Assistant Principal of one of the schools had secured two cubicles for the back of one of the rooms to provide some separate space for students who wished and needed more privacy.

Two of the teachers put together libraries for the children. One was rather extensive. The children were allowed to check books out for home reading.

4. Records

The Program Proposal called for the following records to be maintained for each participant: standardized pre and post-test scores, diagnostic test results, list of remediation skills necessary and plan for remediation, date of entry into program, attendance and parental consent slip.

The evaluator found that all required documents were kept. Further, two of the teachers kept regular daily lesson plans, and/or logs of their own work and the childrens' work. The third teacher did not keep these records as systematically at the first of the year. As the year progressed, regular daily lesson plans were required

by the Assistant Principal in charge from this teacher. Her lesson plans were then regularly kept and checked by the Assistant Principal. As daily papers were checked by the teachers, the daily grades were recorded and the papers were filed in the students' folders. Some of the teachers encouraged the students to take their work home from time to time for their parents to see.

5. Methods of Instruction

As was the case last year, a high degree of individualization was an important aspect of the Title I Optional Assignment Reading Program. The teachers provided this instruction through one-to-one work with the students and through the small group method.

As in the regular Title I Reading components, the Optional Assignment Program Proposal called for the diagnostic-prescriptive approach to be used to teach the following skills: decoding, expanded vocabulary, comprehension, study skills, critical reading, and test-taking techniques. The evaluator found that in all three components of the Optional Assignment Program, this diagnostic-prescriptive approach was being used for teaching the above-mentioned skills. The teachers initially diagnosed with a standardized diagnostic test, and all teachers reported constant evaluation and diagnosis of each student on a daily basis.

The Optional Assignment Reading Program incorporated the Contract Method as explained in Section V,A, 7., p. 21 of this report. Each student worked at her/his own pace on reading skills according to the specifications in the contract. Special notice and indicia of achievement was given students as contracts were completed.

Two of the three teachers used various forms of contracts, and one teacher did not use them, although she was encouraged to consider using them in the future.

In last year's Final Evaluation Report, a recommendation was made that a variety of remedial techniques should again be considered in addition to the Contract Method. This suggestion was implemented in the Program Proposal this year. For example, the teachers were asked to continue doing group lessons as part of each instructional period this year.

Small group instruction was indigenous to the Optional Assignment Program since there were no paraprofessionals. This year, the small group method of instruction was very specifically defined in the Program Proposal. The Proposal read:

> "Small group, individualized instruction will begin initially with an intensive analysis of formal and informal needs assessment of each child. The basic structural plan for small group instruction will be one which includes remediation of basic skill deficiencies. Thus, part of the instructional period will deal with perceptual acuity. Part of the instructional period will deal with appropriate phonics skills. Intensive sight and/or developmental vocabulary recognition will also be taught using a variety of teacher and commercially made materials and games. Comprehension will be a part of all the above activities."

The evaluator noted during observation and through interviews with the teachers, and Coordinating Teacher, that in compliance with this plan, the teachers at the suggestion of the Coordinator and under her supervision, were often dividing their 45-minute periods into three segments. The first segment was generally a group lesson of about 15 minutes administered to the class as a whole, though this was not done every day. If a group lesson was given, the topic for the lesson was usually followed up in the next 15 minutes by an exercise pertaining to the topic of the lesson, or review work. The final 15 minutes of class was almost always reserved for the children to do their contract work or some version of highly individualized work. Within each

day's work, the goals were the remediation of some basic skill deficiency.

Another area of concentration this year, as in the past, was an effort to improve motivational attitudes. The teachers consulted with the students over their diagnostic test results, and in setting goals for positive self-pacing achievement. The teachers were responsible for the selection of materials that fitted the students' needs and were not too difficult and thus defeating. The teachers supervised the students in their use of the skills kits and other self-checking materials. The evaluator noted that the use of the contracts and these individualized materials helped the students build self-reliance and become self-motivated. The evaluator has also seen that in the Title I classrooms, due to the supportive atmosphere created by the teachers, the students appeared to feel a sense of achievement in place of peer-group competition.

However, the evaluator did note that in the beginning of the year in one Optional Assignment reading classroom, seemingly unstructured supervision allowed some students to hinder the other children who wanted to do their work. In this classroom, the teacher did not originally pick up and deliver the students to their classrooms, leaving the students to attend and return to their classes on their own. By the end of the year, this situation was under better control as this teacher had been instructed by the school's Assistant Principal to be more responsible about pick up and delivery of her students.

The evaluator asked the teachers if they had changed their approach or methods of teaching in any significant way since last year. One teacher said that she had not changed her program at all, but that she had been instructed to keep daily lesson plans so that her classes had been more structured. The second said that her students were grouped

differently this year, and that the children seemed more advanced than last year's students. The third teacher said that though she had not changed her format radically, she had gone a bit slower in the beginning to settle her students into the routine of things and set the tone for learning.

6. Reading Master Teacher (Coordinator)

Assisting the Director in Teacher Training was one of the responsibilities of the Teacher/Trainer Coordinator who worked out of the District's Reimbursable Office. The same individual filled this post as did last year. She is an experienced teacher and Math and Reading specialist, who assisted the Director in the general coordination of the Program and the teacher training for the regular Title I Math Components, the Optional Assignment Reading Components and the Impact Aid Math Components.

The major method of teacher training continued to be the on-site visits regularly made by the Coordinator to each component. Some schools were visited more frequently than others as need dictated. During these visits, the Coordinator assisted the Optional Assignment Title I teachers in the planning and implementation of the diagnostic-prescriptive approach. She helped teams in the process of organizing individualization of work. Keeping constant check to be sure daily records were adequately kept by the teachers was an important part of her responsibility. From time to time, the Coordinator provided demonstration lessons for the classes while she was in the school.

The Coordinator assisted in the dissemination and collection of the pre and post-test data collection material and in providing material for the teachers for the diagnostic testing at the beginning of the year.

In the initial stages of the Program, the Teacher Trainer also assisted teachers in ordering materials. Where necessary she offered suggestions as to the kinds of materials available.

The Coordinator was available for parent communication. She also attended PAC meetings at the various schools and/or parent workshops.

The three Optional Assignment teachers attended the general training sessions for all Title I Reading Teachers in the District.

7. Parent Involvement

At the time of the evaluator's second visit in December, two Title I Optional Assignment teachers reported having held one parent meeting each. They were both planning a second in January, but these meetings were not held due to very bad weather.

At their first meetings these teachers had made efforts to get commitments from several parents to represent the schools at the District-Wide PAC meetings. Since the children in the Optional Assignment components are bused within the District from poverty areas within the District, it is more difficult getting parents to take an active part in the school or District PACs. Each of these teachers scheduled at least one more PAC meeting in the spring.

One of the teachers in the Optional Assignment Program had a great deal of personal contact with the students' parents. She reported that she spent some time every day talking with parents about students' progress and/or daily problems. She was aware of the childrens' home lives and how

their learning situations were affected by what went on at home. At her first parent meeting, for example, she discussed the importance of good nutrition as it relates to the child's ability to learn and achieve in school. This same teacher took her Title I students on two trips during the school year.

For a fuller description of objectives, goals and overall Title I implementation of Parental Involvement, see Section V, A, #10, page 26 of this report.

8. Data Analysis

a. Background Information

Following are tables depicting the significance of the computed scores for the majority of children participating in the program. These tables reflect the scores for those students who were tested in September and October, 1977 and post tested in May, 1978, thus meeting the norming criteria required by the State Education Department. The results are shown by grade. Statistical analysis is by the State-Education-Department approved t Test with significance at the .05 level of probability or better.

b. Measurement Instruments

See pages 7 and 10 of this report for a full listing of the Measurement Instruments used.

c. Methods of Analysis

For grades 2-6 , historical regression, predicted vs. obtained post scores were computed for each student and for each grade. In addition, results were computed for all children in the program and are shown separately in Table I. Correlated t-tests were computed between the predicted post scores and obtained post scores.

d. Norm Reference Test Results

TABLE I

Pre Test, Predicted Post Test and Post Test Scores on Stanford Achievement or Diagnostic Reading Tests using appropriate grade level forms. All pre tests were administered in September or October, 1977, with post tests given in May 1978.

Optional Assignment Reading

Budget Code - 5093
Project Number - 81681

Grade	N	Pre-Test Mean	Predicted Post Test Mean	Post Test Mean	t*	p**	Significance
2	17	1.394	1.648	1.971	3.191	.01	Yes
3	40	2.710	3.409	3.285	-1.475	.10	No
4	18	3.161	3.712	3.461	-2.129	.05	No
5	36	3.144	3.592	3.892	1.454	.10	No
6	29	4.117	4.597	5.279	2.533	.01	Yes

Total 140

*t-test
**Probability

There were 155 children in the program, with a total of 147 having pre and post tests. 86 children (59%) scored higher than had been predicted. This was below the predicted objective and the objective, therefore was not met.

Calculations of significance were made on 140 children (7 scores were eliminated because the pre score was not high enough to fit into the historical regression design), and the results are shown by grade in Table I. Grades 2 and 6 were found to be significant at the .01 level of probability. Grades 3, 4 and 5 did not show significance because the actual post tests did not exceed the predicted post tests to the required degree. These data bear out the low percentage results.

B. CONCLUSIONS - OPTIONAL ASSIGNMENT READING

1. The Program did not accomplish its overall stated statistical objective.

2. The lack of paraprofessional assistance to assist the teachers in accomplishing remediation and/or the 10 to 1 ratio of adult to pupil appeared to be a detriment to individualized instruction.

3. Program start-up was accomplished in a timely manner even though there was a delay in approval for funding for the Optional Assignment Components.

4. Two of the three schools provided adequate space for the Reading Program, while the third provided a much smaller room.

5. All components of the Optional Assignment Schools Reading Program had adequate equipment, materials and supplies.

6. Group lessons were given more routinely this year by the teachers at the beginning of the period.

7. One teacher did not follow through on routinely picking up and delivering students to and from the Title I Reading classroom.

8. Teacher Training for this component was conducted during on-site visits. Further, these teachers attended the larger workshop sessions which involved all the Title I Reading Teachers.

9. The Master Teacher was responsive to the needs of the Optional Assignment School Teachers.

C. RECOMMENDATIONS - OPTIONAL ASSIGNMENT READING

The Program should be continued, with attention given to the following:

a. Continue the utilization of the diagnostic-prescriptive approach to teaching reading as well as all efforts being made to implement highly individualized instruction to all pupils by seeking to lower the teacher/pupil ratio from 1 to 10 to 1 to 5-7.

b. Continue present efforts to make the Training Sessions meaningful to the teachers.

c. Request uniform pick up and delivery of students to and from the Title I Reading classroom, in the one school where this was not done, thus assuring more orderly conduct in the halls and allowing a full session of instruction to occur without interruption.

VIII. NON PUBLIC SCHOOLS READING PROGRAM - Budget Code - 5093
Project No. 81654

A. Evaluation Findings

1. Initial Stages of the Program - Student Selection

Three Non Public Schools received Title I Reading services. The Non Public School Reading Teachers entered the Title I Program on October 3rd. The first roll call in 2 schools was October 19th and one was on October 26th, with the usual pre-testing having been concluded. The Stanford Diagnostic Test was then administered by the Title I teachers.

Students served by this Program were those most retarded in reading according to their scores on standardized reading achievement tests. All students in the Program were approved by District #30's Reimbursable Programs office as eligible to be serviced in the Non Public Schools under Title I.

2. Scheduling of Students and Personnel

In this year's Non Public Schools Program, two reading teachers served the three schools. These teachers were both in the Non Public Schools component last year. One teacher was in one of the schools full time, while the other teacher divided her time between the other two schools. Each teacher saw 10 students per period, 5 periods a day, 5 days a week. The teacher who served two schools met three classes each morning in one school and two classes each afternoon in the second school. Each teacher saw 50 students a day, making a total of 100 students in the Non Public Schools Title I Reading Program as a whole.

There were no Paraprofessionals in the Non Public Schools Reading Program.

3. Facilities, Materials, Supplies and Equipment

The teacher who stayed in the same school all day was assigned a large classroom this year as opposed to the tiny room she had to use in the same school last year. She, however, shared this room with the teacher of another remedial program two days a week.

The traveling teacher had a very small room in which to work in the first school, and a regular-sized classroom in the second school.

The teachers creatively decorated the rooms with posters and materials relevant to the subject area. These two teachers also have all materials within easy access for the students' use. Skills kits, games, puzzles, etc. were all displayed on shelf space around the rooms easily accessible to the students.

By the time of the evaluator's second visit in December, all ordering had been completed. The teachers submitted their own orders directly to the District Office, with the aid of the Master Teacher if necessary.

Both of the teachers had Audio/Visual equipment available for the students' use and both teachers provided a range of books for the students to read.

4. Records

The Program Proposal called for the following records to be maintained for each participant: standardized pre and post-test scores, diagnostic test results, lists of remediation skills necessary and plan for remediation, date of entry into the Program, attendance and parental consent slip.

The evaluator found that all required documents were kept. The teachers kept regular daily lesson plans, and/or logs of their own work and the childrens' work. As daily papers were checked by the teachers, the daily grades were recorded and the papers were then filed in the students' folders.

5. Methods of Instruction

As was the case last year, a high degree of individualization was an important aspect of the Title I Non Public Schools Reading Program. The teachers provided this instruction through one-to-one work with the students and through the small group method.

As in the regular Title I Reading components, the Non Public Schools Program Proposal called for the diagnostic-prescriptive approach to be used to teach the following skills: decoding, expanded vocabulary, comprehension, study skills, critical reading, and test-taking techniques. The evaluator found that in all components of the Non Public Schools Program, this diagnostic-prescriptive approach was used throughout the year for teaching the above-mentioned skills. The teachers initially used a standardized diagnostic test,and they reported constant evaluation and diagnosis of each student on a daily basis.

The Non Public Schools Reading Program incorporated the Contract Method as explained in Section V, A, #7, p.21 of this report. Each student worked at her/his own pace on reading skills according to the specifications in the contract. Special notice and indicia of achievement were given students as contracts were completed.

One of the teachers used Contracts with all except her second graders. The other teacher did the same, but also did not use them every day of the week with each class.

In last year's Final Evaluation Report, a recommendation was made that a variety of remedial techniques be considered in addition to the Contract Method. This suggestion was implemented in the Program Proposal this year. For example, the teachers were being asked to continue doing group lessons as a part of each instructional period this year. The evaluator noted that each of these teachers routinely began their classes with group lessons.

Small group instruction was indigenous to the Non Public Schools Program since there were no paraprofessionals. This year, the small group method of instruction was very specifically defined in the Program Proposal. The Proposal read:

> "Small group, individualized instruction will begin initially with an intensive analysis of formal and informal needs assessment of each child. The basic structural plan for small group instruction will be one which includes remediation of basic skill deficiencies. Thus, part of the instructional period will deal with perceptual acuity. Part of the instructional period will deal with appropriate phonics skills. Intensive sight and/or developmental vocabulary recognition will also be taught using a variety of teacher and commercially made materials and games. Comprehension will be a part of all the above activities."

The evaluator noted during observation and through interviews with the teachers and Coordinating Teacher, that they (the teachers at the suggestion of the Coordinator and under her supervision), were often dividing their 45 minute periods into three segments. The first segment was generally a group lesson of about 15 minutes administered to the class as a whole. After the group lesson was given, the topic for the lesson was usually followed up in the next 15 minutes by an exercise pertaining to the topic of the lesson, or review work. The final 15 minutes of class was almost always reserved for the children to do their contract work or some version of highly individualized work. Within each day's work, the goals were the

remediation of some basic skill deficiency.

Another area of concentration this year, as in the past, was an effort to improve motivational attitudes. The teachers consulted with the students over their diagnostic test results, and in setting goals for positive self-pacing achievement. The teachers were responsible for the selection of materials that fitted the students' needs and was not too difficult and thus, defeating. The teachers supervised the students in their use of the skills kits and other self-checking materials. The evaluator noted that the use of the contracts and these individualized materials helped the students build self-reliance and become self-motivated. The evaluator also saw that in the Title I classrooms, due to the supportive atmosphere created by the teachers, the students appeared to feel a sense of achievement in place of peer group competition.

6. Reading Master Teacher (Coordinator)

Assisting the Director in Teacher Training was one of the responsibilities of the Master Teacher Coordinator who worked out of the District's Reimbursable Office. The same individual filled this post as did last year. She is an experienced teacher and Reading specialist, who assisted the Director in the general coordination of the Program and the teacher training for the regular Title I Reading Components, the Non-Public School Reading Components and the Impact Aid Reading Components.

The major method of teacher training continued to be the on-site visits regularly made by the Coordinator to each component. Some schools were visited more frequently than others as need dictated. During these visits, the Master Teacher assisted the Non-Public Schools Title I teachers in the planning and implementation of the diagnostic-prescriptive approach. She helped in the process of organizing individualization of work. Keeping constant check to be sure daily

records were adequately kept by the teachers was an important part of her responsibility. From time to time, the Coordinator provided demonstration lessons for the classes while she was in the school.

The Master Teacher also assisted in organizing the dissemination and collection of the pre and post-test data collection material and for providing material for the teachers for the diagnostic testing at the beginning of the year.

In the initial stages of the Program the Master Teacher also assisted teachers in ordering materials. Where necessary she offered suggestions as to the kinds of materials available.

The Master Teacher was also available for parent communication. She also attended PAC meetings at the various schools and/or parent workshops.

The Non Public Scools teachers attended the general sessions held by the Coordinator for all Title I Reading Teachers in the District.

7. Parent Involvement

The District Director of Funded Programs encouraged the Principals of the Non Public Schools to organize Parent Advisory Councils in their schools for the Title I parents.

The teachers made contact with parents when necessary through phone calls and through letters, or when the parents came to visit the schools at open house.

8. Data Analysis

a. Background Information

Following are tables depicting the significance of the computed scores for the majority of children participating in the program. These tables reflect the scores for those students who were tested in September

and October 1977 and post tested in May, 1978, thus meeting the norming criteria required by the State Education Department. The results are shown by grade. Statistical analysis is by the State Education Department approved t Test with significance at the .05 level of probability or better.

b. Measurement Instruments

See pages 7 and 10 of this report for a full listing of the Measurement Instruments used.

c. Methods of Analysis

For grades 2-6, historical regression, predicted vs. obtained post scores were computed for each student and for each grade. In addition, results were computed for all children in the program and are shown separately in Table I. Correlated t-Tests were computed between the predicted post scores and obtained post scores.

d. Norm Reference Test Results

TABLE I

Pre Test, Predicted Post Test and Post Test Scores on Stanford Achievement or Diagnostic Reading Tests using appropriate grade level forms. All pre tests were administered in September or October, 1977, with post tests given in May 1978.

Non Public Schools Reading

Budget Code - 5093
Project Number - 81654

Grade	N	Pre-Test Mean	Predicted Post Test Mean	Post Test Mean	t*	p**	Significance
2	44	1.516	1.867	2.364	4.955	.01	Yes
3	24	2.046	2.432	2.779	3.567	.01	Yes
4	7	2.757	3.158	3.757	3.887	.01	Yes
5	21	2.790	3.130	3.952	4.807	.01	Yes

Total - 96

*t-test
**Probability

There were 102 children enrolled in the program, with 96 having valid pre and post tests. 84% of the children exceeded their predicted post test. According to the data presented in Table I, the t score results were highly significant (.01). This program fully met the objective both in percent and by statistical significance.

B. CONCLUSIONS - NON-PUBLIC SCHOOLS READING PROGRAM

1. The program accomplished its remediation objectives according to the data reported. Significance has been achieved in all grades on norm referenced tests.

2. Program start-up was accomplished in a timely manner after the teachers were assigned to their schools.

3. Two of the three schools provided adequate space for the reading program; the third did not.

4. The diagnostic-prescriptive approach was used per the Program Proposal.

5. More individualization would have been possible if the groups had been smaller or if a paraprofessional had been added to each component.

6. Teacher training was conducted during the on-site visits, and the workshop format was used for the large sessions per last year's evaluation recommendation.

7. The Master Teacher was responsive to the needs of the Non-Public School Reading Teachers.

C. RECOMMENDATIONS

1. The Program should be continued.

2. Continue the utilization of the diagnostic-perscriptive approach to teaching reading as well as all efforts being made to implement highly individualized instruction to all pupils.

3. Continue present efforts to make the Training Sessions meaningful to the teachers.

4. Seek adequate space for the program in one of the three schools.

IX. IMPACT AID LOW RENT HOUSING COMPONENTS - Reading Program - 5093-88752
Reading Modification Program - 5093-88752
O.A. Reading Program - 5093-88781
O.A. Math Program - 5093-88753
Math Program - 5093-88753

A. Findings

1. Background Information

The Impact Aid components of the Title I Reading and Math Program followed the same guidelines, and strove to fulfill the same requirements as the regular Title I Reading and Math programs. These programs were evaluated using the same criteria as for the Title I Reading and Math programs. See Section II , Part A for a description of these objectives, and Section III, pps.5-12 for a description of the method employed to evaluate this program.

2. Scope of the Program and Starting Dates

a. Reading 5093-88752

This program component involved one paraprofessional at one elementary school who was responsible for 25 children in grades 2, 3, 4 and 5. The paraprofessional began working on November 29th, 1977.

b. Reading Modification - 5093-88752

This program component involved two teachers in one elementary school who were responsible for 25 students apiece in grades 1, 2, 3, 4 and 5. One of these teachers had only 1st graders in her classes. These two teachers began working in mid-March.

In another elementary school, three paraprofessionals began instructing first and second graders in mid-March. They instructed 75 students. One of these paraprofessionals left the position before the end of the year, so her students did not receive the same amount of instruction as the other students in this component.

One paraprofessional was placed in one junior high on

February 1st, but on April 10th, she was changed to another junior high for the remainder of the year. The instruction of the first group of children in the first junior high was taken over by a Reading Teacher under the regular Reading Modification for Title I (5093-81652). In the second school, the paraprofessional was responsible for 20 students, and finished out the year with these students.

c. OA Reading - 5093-88781

A paraprofessional tutored 20 students in reading in grades 2, 3, 4, 5 and 6. These were students bused from the Queensbridge section of Queens to P S. 11. This component got under way the last of March.

d. OA Impact Aid Math - 5093-88753

This paraprofessional was placed in an OA program at the end of November, 1977. She tutored 20 students in Math, although she did this under the supervision of the OA Title I Reading teacher in this school, and shared a room with this Reading teacher.

e. Impact Aid Math - 5093-88753

Three teachers worked in this part of the program, instructing a total of 189 students by the end of the year. The students were in grades 3, 4, 5, 6, 7 and 8.

The one elementary school teacher worked with two paraprofessionals in her classroom. This program began in the first part of January.

The other two teachers worked in teams with one paraprofessional each. The two Intermediate schools were served by these teams. One component began January 1st, and the other February 1st.

3. Facilities and Materials

a. Reading - 5093-88752

The one paraprofessional in this component was part of the large Title I program at a school where all Reading and Math Teachers had to travel. The program teachers and paraprofessionals had a fairly large office space in the basement of the school where preparation was done and where the supplies were kept. All materials were shared by all the teachers, but since it was difficult to transport materials up several flights of stairs, the teachers did the best they could providing materials for the children under those circumstances.

b. Reading Modification - 5093-88752

Two elementary teachers were in the same school described in a. above; however, one of these teachers used a small counselling room for her classes while the other sometimes used a storage room in the basement of the school or lined her students up in the hall of the basement. These teachers borrowed from the general store of materials as well as utilizing teacher-made materials.

The three teachers in the other elementary school had small rooms to themselves,and used materials they ordered, plus those on loan from the other Title I Reading programs in the school and teacher-made materials.

The paraprofessional at the junior high worked under the supervision of the Title I Reading teacher, but was in a separate room which had plenty of space. She also borrowed materials from the regular Title I teacher.

c. OA Reading - 5093-88781

The paraprofessional in this program shared a large, attractive room with another teacher who was not with Title I, but the PSEN program. She had adequate supplies, and said that the Master

Teacher from the District Office had been helpful in her ordering of supplies. She also provided a small library for the students in her program.

d. OA Impact Aid Math - 5093-88753

The paraprofessional in this component worked under the supervision of the OA Title I teacher, and shared her classroom space, using a table in the back of the room. Since she started in November, she had most of her own materials which she had ordered by the Spring. The space and the materials were adequate, as were the Audio/Visual equipment she shared with the other teacher in the room.

e. Impact Aid Math - 5093-88753

The elementary school teacher who worked with two paraprofessionals in her program had a large, attractively decorated classroom in which to conduct her math classes. She had an abundance of supplies as well.

The two other math teams in this component, one in each intermediate school, both had to travel from room to room. Therefore, they had to transport materials. In the classes, the evaluator observed these teachers primarily using workbooks, teacher-made materials and some of the self-grading kits. Each of the teachers reported that the materials ordered for the program had all arrived and were used as well as possible under the mobile circumstances.

4. Record Keeping

The teachers in these programs were keeping the required documents and records. These included: date of entry into the program, all test scores, diagnostic check sheet, attendance, parental consent forms, work folders showing students' progress and individual work contracts for the students' particular needs.

5. Individualization of Instruction

All the teachers in this program were using the diagnostic-prescriptive approach to teaching. Each of the students in the program were pre-tested upon entry into the program and post-tested at the end of the year.

Most of these teachers were using the "Contract Method" in implementing individualization. (For a description of the "Contract Method", see Section V,A, Part 7 of the Reading portion of this report.) Some teachers and paraprofessionals did not use contracts because they were teaching only first and second graders who appear less suited to contracts than the older students.

6. Teacher Training

These teachers reported receiving periodic visits from the Master Teacher, and all said that help was given them as was necessary by the Master Teacher.

7. Communication Between Title I Impact Aid Teachers and Classroom Teachers

All the teachers reported having almost daily, informal contact with their student's classroom teachers upon pick-up and delivery of the students, or, for example, in the teachers' lounge.

8. Parental Contact

The teachers reported that most of their contact with the parents occurs when the parents visit the schools on Open-School Week, or when there is a special problem. Home contacts are made by phone or by letter.

9. Data Analysis

a. Background Information

Following are tables depicting the significance of the computed scores for 45 children who were tested in September and October 1977 and post tested in May, 1978, thus meeting the norming criteria required by the State-Education Department. The results are shown by grade. Statistical analysis is by the State-Education-Department approved t test with significance at the .05 level of probability or better.

The students who entered the program after October, 1977 as a result of modifications in the program, or, for example, as replacements for children who moved from the District, were tested with Criterion Reference Tests, (CRT). Since CRTs are specific to the instruction given, they are scored by determining the number of correct Post Test responses made from items failed on the Pre Test.*

b. Measurement Instruments

See pages 7 and 10 of this report for a full listing of the Measurement Instruments used.

c. Methods of Analysis

Historical regression, predicted vs. obtained post scores were computed for each student and for each grade. However, because of the small N results were analyzed for all 25 children as a group. Correlated t-Tests were computed between the predicted post scores and obtained post scores.

*See page 8 for fuller explanation of CRTs.

10. Test Results

a. Impact Aid Reading - 5093-88752
Norm Referenced Test Results

TABLE I

Pre Test, Predicted Post Test and Post Test Scores on Stanford Achievement or Diagnostic Reading Tests using appropriate grade level forms. All pre tests were administered in September or October, 1977, with post tests given in May 1978.

Grade	N	Pre-Test Mean	Predicted Post Test Mean	Post Test Mean	t*	p**	Significance
All	25	2.528	2.929	3.560	3.883	.01	Yes

Twenty six children were in the program and valid pre and post tests were available for 25 children. Nineteen children exceeded their predicted post tests, indicating that 76% of the children surpassed the objective.

Because the N was so small for the 4 grades tested it was considered inappropriate to report t tests by individual grades. However, a t test was run for all 25 scores to determine their significance as a program. Inasmuch as each child was assessed according to his or her predicted test scores, the difference between grades was not a factor. The result indicated that the t score was highly significant (.01) for the program as a whole.

The program objective was met on both percentage and a statistically significant basis.

*t-test
**Probability

b. Impact Aid Reading Modification 5093-88752
Criterion Reference Test Results

(1) Grade 1

TABLE II

Grade 1 Total Students Pretested 83	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	32.5	43% / 57%	pass / fail
Structural Analysis	27.5	55% / 45%	pass / fail
Vocabulary	32	57% / 43%	pass / fail
Comprehension	NA		pass / fail

It appears that the treatment group had more difficulty with Phonetic Analysis than with Structural Analysis and Vocabulary, since more pupils failed than passed. The difference between pass and fail is not enough to state that more teaching emphasis should be placed on phonetic analysis; however, it does appear that the post test was difficult for a goodly number of the children on all these items.

(2) Grade 2

TABLE III

Grade 2 Total Students Pretested 40	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	15.3	43% / 57%	pass / fail
Structural Analysis	16.5	55% / 45%	pass / fail
Vocabulary	14.8	46% / 54%	pass / fail
Comprehension	NA		pass / fail

The results are approximately the same as for Grade 1. It appears that continued teaching emphasis is needed in all these items.

(3) Grade 3

TABLE IV

Grade 3 Total Students Pretested 10	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA		pass / fail
Structural Analysis	NA		pass / fail
Vocabulary	6		pass / fail
Comprehension	5.3	62% / 38%	pass / fail

All the children did well on Vocabulary and most of them succeeded on Comprehension

(4) Grade 4

TABLE V

Grade 4 Total Students Pretested 16	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA		pass / fail
Structural Analysis	NA		pass / fail
Vocabulary	2.5	80% / 20%	pass / fail
Comprehension	9	70% / 30%	pass / fail

All the children did well on Vocabulary and most of them succeeded on Comprehension.

(5) Grade 5

TABLE VI

Grade 5 Total Students Pretested 4	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA		pass / fail
Structural Analysis	NA		pass / fail
Vocabulary	NA		pass / fail
Comprehension	2.3		pass / fail

The small N has little meaning; however, all three subtests of Comprehension were passed 100%.

(6) Grades 7, 8 and 9

TABLE VII

Grade 7 Total Students Pretested 16	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA		pass / fail
Structural Analysis	NA		pass / fail
Vocabulary	14.5	59% / 41%	pass / fail
Comprehension	9	73% / 27%	pass / fail

See Below

TABLE VIII

Grade 8 Total Students Pretested 5	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA		pass fail
Structural Analysis	NA		pass fail
Vocabulary	4.5	78% / 22%	pass fail
Comprehension	3.3	61% / 39%	pass fail

TABLE IX

Grade 9 Total Students Pretested 5	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA		pass fail
Structural Analysis	NA		pass fail
Vocabulary	5	50% / 50%	pass fail
Comprehension	4.3	70% / 30%	pass fail

The Tables above indicate that at the upper grades, the majority of the children were able to successfully gain the required information and pass the criterion after a slow start at the beginning of the program. It appears that gains in Comprehension were comparatively high with 74% averaging success.

c. Impact Aid Reading (OA) - 5093-88781
Criterion Reference Test Results

There were too few children in this program to draw many conclusions about their progress. The data is shown below for information purposes.

(1) Grade 2

TABLE X

Grade 2 Total Students Pretested 9	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	7	43% / 57%	pass / fail
Structural Analysis	7	22% / 78%	pass / fail
Vocabulary	7	50% / 50%	pass / fail
Comprehension	NA		pass / fail

(2) Grade 3

TABLE XI

Grade 3 Total Students Pretested 2	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA		pass / fail
Structural Analysis	NA		pass / fail
Vocabulary	-		pass / fail
Comprehension	1.6	19% / 81%	pass / fail

(3) Grade 4 TABLE XII

Grade 4 Total Students Pretested 2	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA		pass fail
Structural Analysis	NA		pass fail
Vocabulary	2		pass fail
Comprehension	2	75% / 25%	pass fail

(4) Grade 5 TABLE XIII

Grade 5 Total Students Pretested 2	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA		pass fail
Structural Analysis	NA		pass fail
Vocabulary	1		pass fail
Comprehension	1.7	76% / 24%	pass fail

(5) Grade 6 TABLE XIV

Grade 6 Total Students Pretested 5	Average N of Treatment Group	Criterion Referenced Tests Reading 0 — 100%	
Phonetic Analysis	NA		pass fail
Structural Analysis	NA		pass fail
Vocabulary	1		pass fail
Comprehension	1.5	50% / 50%	pass fail

d. Impact Aid Math - (OA) - 5093-88753
Norm Reference Test Results

Pre Test, Predicted Post Test and Post Test Scores on Stanford Achievement or Diagnostic Reading Tests using appropriate grade level forms. All pre tests were administered in September or October, 1977, with post tests given in May 1978.

TABLE XV

Grade 5	N	Pre-Test Mean	Predicted Post Test Mean	Post Test Mean	t*	p**	Significance
Computation	11	3.782	4.240	5.284	3.378	.01	Yes
Concepts	11	3.718	4.166	4.673	2.006	.05	No
Problem Solving	11	3.345	3.733	4.382	2.935	.05	Yes
Total	11	3.6	4.089	4.809	5.072	.01	Yes

TABLE XVI

Grade 6	N	Pre-Test Mean	Predicted Post Test Mean	Post Test Mean	t*	p**	Significance
Computation	9	5.178	5.750	6.222	1.839	.05	No
Concepts	9	4.178	4.615	5.467	3.432	.01	Yes
Problem Solving	9	4.511	4.993	5.356	1.064	.15	No
Total	9	4.589	5.082	5.744	4.648	.01	Yes

*t-Test
**Probability

There were 20 children enrolled and all 20 had valid pre and post tests. 80% of the children tested exceeded their predicted post test scores.

The Math Program was treated differently this year. Tests of significance were run on "Tested" scores as well as the sub items of "Computation, Concepts and Problem Solving". This was done to determine if there should be special emphasis placed by the Master Teacher on any one or combination of sub components.

Grades 5 and 6 were tested on all 3 components as well as on the total score.

The totals were highly significant for both grade 5 and 6 at the .01 level of significance.

Grade 5 showed the highest gains on Computation indicating that future work might be concentrated on Mathematical Concepts next year in Grade 6. Problem Solving showed a significant gain, although not to the extent as indicated by Computational scores.

Grade 6, on the other hand, showed significance on Concepts, but did not do as well on Computation and Problem Solving.

In conclusion, the program was highly successful from both a percentage and test of significance point of view. The objective was met.

e. Impact Aid Mathematics - 5093-88753
Criterion Reference Test Results

(1) Grade 3

TABLE XVII

Grade 3 Total Pretested 15	Average N of Treatment Group	Criterion Referenced Tests Mathematics 0 — 100%	
Fractions/ Positive Rational Numbers & Zero	NA		pass fail
Decimals	NA		pass fail
Addition: Concepts & Skills	10	70% / 30%	pass fail
Subtraction: Concepts & Skills	15	47% / 53%	pass fail
Multiplication: Concepts & Skills	13	38% / 62%	pass fail
Division: Concepts & Skills	2	50% / 50%	pass fail
Place Value	15	60% / 40%	pass fail

It appears that most success was achieved in Addition and Place Values. Less success was shown in Subtraction and Multiplication.

(2) Grade 4

TABLE XVIII

Grade 4 Total Pretested 31	Average N of Treatment Group	Criterion Referenced Tests Mathematics 0 — 100%	
Fractions/ Positive Rational Numbers & Zero	1		pass fail
Decimals	1		pass fail
Addition: Concepts & Skills	5		pass fail
Subtraction: Concepts & Skills	8	56% / 44%	pass fail
Multiplication: Concepts & Skills	13	77% / 23%	pass fail
Division: Concepts & Skills	14.5	69% / 31%	pass fail
Place Value	15.5	55% / 45%	pass fail

Most success was achieved in Addition, Multiplication and Division. Moderate success was shown in Place Values and Subtraction. Data on Fractions and Decimals was inconclusive.

(3) Grade 5

TABLE XIX

Grade 5 Total Pretested 15	Average N of Treatment Group	Criterion Referenced Tests Mathematics 0 — 100%	
Fractions/ Positive Rational Numbers & Zero	7	14%	pass
		86%	fail
Decimals	6	83%	pass
		17%	fail
Addition: Concepts & Skills	1		pass
			fail
Subtraction: Concepts & Skills	5	20%	pass
		80%	fail
Multiplication: Concepts & Skills	6	42%	pass
		58%	fail
Division: Concepts & Skills	5.5	36%	pass
		64%	fail
Place Value	4.5	56%	pass
		44%	fail

There are insufficient data in most cases to draw conclusions. It appears that the treatment group in Decimals showed good progress.

(4) Grade 6

TABLE XX

Grade 6 Total Pretested 38	Average N of Treatment Group	Criterion Referenced Tests Mathematics 0 — 100%	
Fractions/ Positive Rational Numbers & Zero	3	50%	pass
		50%	fail
Decimals	9	56%	pass
		44%	fail
Addition: Concepts & Skills	4	75%	pass
		25%	fail
Subtraction: Concepts & Skills	8	59%	pass
		41%	fail
Multiplication: Concepts & Skills	9	58%	pass
		42%	fail
Division: Concepts & Skills	8.25	48%	pass
		52%	fail
Place Value	8	56%	pass
		44%	fail

The success average for all 7 items was 57%, indicating that most items were difficult for this grade.

(5) Grade 7

TABLE XXI

Grade 7 Total Pretested 57	Average N of Treatment Group	Criterion Referenced Tests Mathematics 0 — 100%	
Fractions/ Positive Rational Numbers & Zero	14.5	7% / 93%	pass / fail
Decimals	4	75% / 25%	pass / fail
Addition: Concepts & Skills	2.5	80% / 20%	pass / fail
Subtraction: Concepts & Skills	14	57% / 43%	pass / fail
Multiplication: Concepts & Skills	15.5	81% / 19%	pass / fail
Division: Concepts & Skills	21.5	65% / 35%	pass / fail
Place Value	19.5	59% / 41%	pass / fail

A high degree of success was achieved in Multiplication, Addition and Decimals. The greatest initial problem areas were in Division and Place Value and the post test indicated that 62% of the pupils were successful in these 2 areas.

(6) Grade 8

TABLE XXII

Grade 8 Total Pretested 33	Average N of Treatment Group	Criterion Referenced Tests Mathematics 0 — 100%	
Fractions/ Positive Rational Numbers & Zero	9.5	47% / 53%	pass / fail
Decimals	7.5	80% / 20%	pass / fail
Addition: Concepts & Skills	NA		pass / fail
Subtraction: Concepts & Skills	8	69% / 31%	pass / fail
Multiplication: Concepts & Skills	8.5	94% / 6%	pass / fail
Division: Concepts & Skills	12.5	72% / 28%	pass / fail
Place Value	15	63% / 37%	pass / fail

A high degree of success was achieved in Multiplication, Decimals and Division. Moderate success was shown on Subtraction, with Fractions presenting the most corrective need.

B. Conclusions - Impact Aid-Low Rent Housing Programs

1. The objectives of the Impact Aid Low Rent Housing Reading Program were met.

2. Program-start-up was accomplished in a timely manner upon program approval.

3. The diagnostic-prescriptive approach was implemented per the program proposal.

4. Individualization of instruction occurred in varying degrees in all schools.

5. The Contract Method appears to work more satisfactorily as the grade levels increase.

6. Most of the programs had adequate facilities, materials and equipment.

7. All program teachers kept proper records and filed mandatory documents.

8. Title I teachers communicated with the classroom teachers this year through the system established by the Master Teacher.

C. Recommendations - Impact Aid - Low Rent Housing Programs

1. The program should be continued.

2. The Contract Method of providing individualized instruction should continue to be stressed at the upper grade levels because it most closely approaches the concept of follow-through or the prescriptive-diagnostic approach that is employed.